VALPARAISO UNIVERSITY BULLETIN

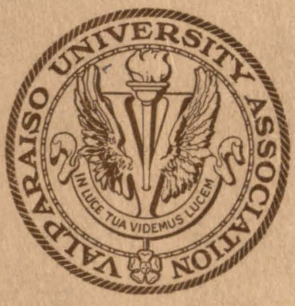
Sixty-Sixth Year

3:50 – 4:40 for 6 weeks Thurs

Announcements for

1928-1929

Dan Kimmick Auditorium



Valparaiso, Indiana

VALPARAISO UNIVERSITY BULLETIN

New Series, Vol. 2. April 1, 1928 No. 1

Sixty-Sixth Year

Announcements for
1928-1929

Published monthly by Valparaiso University Association

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APPLICATION FOR ADMISSION

(For New Students Only)

VALPARAISO UNIVERSITY

VALPARAISO, INDIANA

Fill out fully all that is requested, in your own handwriting, and forward at once to the Registrar, Valparaiso University, Valparaiso, Indiana. Students are advised to send preliminary fees by Postal Money Order, Bank Draft or Check. Do not send cash. Please make remittance payable to the Valparaiso University Association.

Date.....19....

1. Name in Full.....
2. Address .....
   Number and Street City State
3. Date of Birth.....Present Occupation.....
4. High School Preparation:
   a. Name of High School.....
   b. Address .....
   c. Date of Graduation, if a graduate.....
   d. Number of years in High School.....
5. Previous College Attendance.....
   a. Name of College or University.....
   b. Address .....
   c. Course..... d. Rank (Underline one) Freshman, Sophomore, Junior, Senior.
6. Of what church or other religious organization, if any, are you a member? .....
7. What special recognition, if any, have you received for excellence in school work, such as honors, prizes or scholarships?.....
   .....
8. In what studies are you particularly interested?.....
   .....
9. When do you expect to enter?.....
10. **The Matriculation Fee must accompany this application.** Students are advised to send room deposit and dining hall reservation fees also. Please indicate hereon the fees you are sending.
    a. Matriculation Fee (New Students Only) ($5.00).....
    b. Room Deposit ($3.00).....Dining Hall Reservation ($2.00).....

The room deposit and dining hall fees are refunded to applicants who are not accepted or who do not enroll. The Matriculation Fee is refunded only to those applicants who are not accepted.

1928

JANUARY

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1929

JANUARY

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JULY

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SEPTEMBER

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OCTOBER

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NOVEMBER

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24	25	26	27	28	29	30
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DECEMBER

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22	23	24	25	26	27	28
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UNIVERSITY CALENDAR

1928

Meeting of Student Advisory Committee, Wednesday, September 19.
First semester begins Thursday, September 20.
Registration of new students, September 20.
Registration of old students, September 21.
Recitations begin Monday, September 24.
First convocation, Monday, September 24, 10:30 A. M.
First chapel service, Tuesday, September 25, 10:30 A. M.
Registration closes at 12:00 M., Saturday, October 6.
Mid-semester reports due in Registrar's office, Saturday, November 24.
Thanksgiving Recess, November 29, 30, December 1, 2.
Christmas holidays begin Saturday, December 22.

1929

Christmas holidays end Sunday, January 6.
Recitations resumed, Monday, January 7.
First semester examinations, February 2, 4 to 9.
First semester ends Saturday, February 9.
Second semester begins Monday, February 11.
Registration for second semester, Monday, February 11.
Recitations begin Tuesday, February 12.
Washington's Birthday, a holiday, Friday, February 22.
Registration for second semester closes at 12:00 M., Saturday, February 23.
Easter Recess, March 29, 30, 31.
Mid-semester reports due at the Registrar's Office, Saturday, April 13.
Memorial Day convocation, Thursday, May 30, 10:30 A. M.
Second semester examinations, June 7, 8, 10 to 14.
Second semester ends Friday, June 14.
Commencement Day, Sunday, June 16.

SUMMER SESSION, 1928

Registration, June 18.
First five-week session, June 18 to July 21.
Second five-week session, July 23 to August 25.

SUMMER SESSION, 1929

Registration, June 17.
First five-week session, June 17 to July 20.
Second five-week session, July 22 to August 24.

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PART I

OFFICERS OF ADMINISTRATION AND INSTRUCTION

BOARD OF DIRECTORS*

Harry A. Eberline, *President*
Ralph E. Richman, *Vice-President*
Frank J. Lankenau, *Honorary Vice-President*

HENRY A. DAHLEN.....New York City
OSCAR C. KREINHEDER.....Detroit, Michigan
RALPH E. RICHMAN.....Cincinnati, Ohio
HENRY F. ROHRMAN.....Chicago, Illinois

WILLIAM C. DICKMEYER.....Fort Wayne, Indiana
EDWARD W. JAEGER.....Chicago, Illinois
LUDWIG H. LETZ.....Crown Point, Indiana
MARTIN H. LUECKE.....Fort Wayne, Indiana
PAUL F. MILLER.....Fort Wayne, Indiana

HARRY A. EBERLINE.....Detroit, Michigan
WILLIAM D. HOLTERMAN.....Fort Wayne, Indiana
OTTO C. LEMKE.....Wausau, Wisconsin
LOUIS A. LINN.....New York City
PETER W. MEYN.....Hammond, Indiana
GEORGE F. NOLDE.....Richmond, Virginia

Paul F. Miller, *Secretary*
William C. Dickmeyer, *Treasurer*

EDUCATIONAL COUNSELOR

DR. FLOYD W. REEVES,
Director, Bureau of School Service,
University of Kentucky.

*1927-28.

STANDING COMMITTEES OF THE BOARD

EXECUTIVE COMMITTEE

COMMITTEE ON INSTRUCTION

COMMITTEE ON FINANCE AND INVESTMENT

COMMITTEE ON BUDGET

COMMITTEE ON BUILDINGS AND GROUNDS

COMMITTEE ON AUDIT

AUDITORS

COOPER, WINSLOW, AND DAVIS,
Certified Public Accountants,
Chicago, Illinois.

ADMINISTRATIVE ORGANIZATION

I.
THE COLLEGE OF LIBERAL ARTS

Department of Botany.
Department of Business Management.
Department of Chemistry.
Department of Education, Philosophy, and Psychology.
Department of Engineering.
Department of English Language and Literature.
Department of Fine Arts.
Department of Foreign Languages and Literatures.
Department of Geology.
Department of Home Economics.
Department of Mathematics and Physics.
Department of Social Science.
Department of Religion.
Department of Zoology.

II.
THE COLLEGE OF PHARMACY

III.
THE SCHOOL OF LAW

William H. T. Dau, D.D.*.....*President*
John C. Baur.....*Acting President*
Frederick W. Kroencke, A.B., Ph.D.....*Acting Dean of the University and of the College of Liberal Arts, Director of the Summer Session*
Harry V. Fuller, Ph.D.....*Acting Dean of the College of Pharmacy*
Milo Jesse Bowman, A.M., LL.D.....*Acting Dean of the School of Law*
Henry H. Kumnick, A.B., LL.B.....*Dean of Students*
Albert F. Scribner, B.C.S.....*Registrar*
Katharine Ertz Bowden, B.S.....*Librarian*
Ebbo H. Miller, M.D.....*University Physician*
Karl C. H. Ulmer.....*Bursar*
Catharine Corboy .....*Alumni Secretary*

*Absent on leave, 1927-28.

FACULTY

1927-1928

William H. T. Dau, D.D., *President.*
Concordia Theological Seminary, St. Louis, Graduate, 1886; ibid., D.D., 1928.

John C. Baur, *Acting President.*
Concordia Theological Seminary, St. Louis, Graduate, 1908.

*Harry Edmund Bilger, M.S., *Professor of Civil Engineering.*
Bucknell University, Ph.B., 1903; University of Missouri, B.S. in C.E., 1907; Bucknell University, M.S., 1915; ibid., C.E., 1923.

Milo Jesse Bowman, LL.D., *Professor of Law.*
Hanover College, Indiana, A.B., 1896; ibid., A.M., 1898; Indianapolis College of Law, LL.B., 1902; Hanover College, LL.D., 1922.

Edmund Walter Chaffee, Mus.D., *Professor of Music.*
Stern's Conservatory, Berlin, student, 1887-90; ibid., Assistant in Music, 1889-90; Valparaiso University, Mus.D., 1920.

*Cyrus LaFayette Cox, Ph.C., B.S., *Professor of Pharmacy.*
Valparaiso University, Ph.G., 1915; ibid., Ph.C., 1916; ibid., B.S., 1920; E. I. Dupont Company, chemist, 1915-16; British Chemical Co., Trenton, Ontario, 1916-17; Cawker City, Kansas, Pharmacist, 1917-18; Valparaiso University, Professor, 1918-24; Pyorrout Laboratories, Inc., Washington, D. C., Pharmaceutical Chemist, 1925.

*Albert Frederick O. Germann, Sc.D., *Professor of Chemistry.* (Absent on leave).
Indiana University, B.A., 1909; ibid., M.A., 1910; University of Wisconsin, M.A., 1910; University of Geneva, Switzerland, Sc.D., 1912.

*Louis Frederick Heimlich, Ph.D., *Professor of Botany.*
Purdue University, B.S., 1914; ibid., M.S., 1916; University of Wisconsin, Honorary Fellow in Botany, 1924-25; ibid., Ph.D., 1926.

*Harry Victor Fuller, Ph.D., *Acting Professor of Chemistry.*
University of Minnesota, student, 1903; Polytechnique Federal of Basel, Switzerland, student 1909-12; University of Zurich, student, 1910-12; University of Basel, A.M., 1912; ibid., Ph.D., 1912.

*Lloyd Morgan Crosgrave, A.M., *Associate Professor of Economics.*
Indiana University, A.B., 1909; Harvard University, A.M., 1911; Harvard University, Graduate Student, 1910-14.

Virgil Edwin Berry, LL.B., *Assistant Professor of Law.*
Indiana University, LL.B., 1909; Logansport, Indiana, Attorney at Law, 1911-13.

*Robert Christian Kissling, Ph.D., *Assistant Professor of Classics and Spanish.*
Concordia Theological Seminary, St. Louis, Missouri, Graduate, 1901; University of Chicago, Fellow in Greek, 1911-12; ibid., Ph.D., 1913.

Frederick William Kroencke, Ph.D., *Assistant Professor of Education and Philosophy.*
Concordia Theological Seminary, St. Louis, Missouri, Graduate, 1895; University of Cincinnati, A.B., 1924; Taft Fellow, 1926-27; ibid., Ph.D., 1927.

John Wallace Morland, J.D., *Assistant Professor of Law.*

Indiana State Normal School, Graduate, 1910; Indiana University, A.B., 1916; ibid., LL.B., 1917; University of Chicago, J.D., 1922.

*René Wentworth Pinto, Ph.D., *Assistant Professor of History and Political Science.*

New York Military Academy, Graduate, 1914; ibid., Graduate Student, 1914-16; United States Military Academy, Student, 1916-17; American Expeditionary Force, Second Lieutenant of Infantry, 1918-19; University of Wisconsin, A.B., 1922; Columbia University, A. M., 1925; University of Wisconsin, Ph.D., 1927.

*Pleasant Ernest Roller, Ph.D., *Assistant Professor of Physics.*

Friends' University, Wichita, Kansas, B.A., 1920; University of Colorado, M. A., 1923; University of Nebraska, M.S., 1926; University of Colorado, Ph.D., 1927.

*Waldemar Joseph Trjitzinsky, Ph.D., *Assistant Professor of Mathematics.*

University of California, A.B., 1924; ibid., A.M., 1925; ibid., Ph.D., 1926; ibid., University Fellow in Mathematics, 1926-27.

*Mae Lavinia Wells, A. M., *Assistant Professor of Home Economics.*

Columbia University, B.S., 1914; ibid., A.M., 1918; ibid., Graduate Student and Assistant, 1921-24; Graduate Student, summer 1927.

*Ross Winship, M.A., *Assistant Professor of Mechanical Engineering.*

Cornell University, M.E., 1911; United States Army, Ordnance Department, First Lieutenant, 1917-19; United States Veterans' Bureau, Vocational Officer, 1919-20; Columbia University, A.M., 1927.

*Harold Montgomery Barnett, M.S., *Instructor in Chemistry.*

Nebraska Wesleyan University, A.B., 1925; University of Minnesota, Assistant, 1925-27; ibid., M.S., 1927.

Walter Emil Bauer, M.A., *Instructor in History.*

Concordia Theological Seminary, St. Louis, Graduate, 1921; Columbia University, M.A., 1922; Harvard University, Student, 1922-23.

Herman Blickensderfer, B.S., *Instructor in Civil Engineering.*

Missouri School of Mines and Metallurgy, B.S., 1927; Missouri Highway Commission, Assistant Project Engineer, summers, 1925 and 1926; Illinois Highway Commission, Junior Highway Engineer, summer, 1927.

*Margarette Ball Dickson, M. A., *Instructor in English.*

Iowa State Teachers College, B.A., 1925; University of South Dakota, Teaching Fellow in English, 1925-26; ibid., M.A., 1927.

*Alfred Leon Foster, M.S., *Instructor in Mathematics.*

California Institute of Technology, B.S., 1926; ibid., Graduate Scholarship, 1926-27; ibid., M.S., 1927.

*Arthur Haroldson, Ph.G., *Instructor in Chemistry and Pharmaceutical Chemistry.*

Valparaiso University, Ph.G., 1926; University of Chicago, Student, 1923-27.

*Lily Hambly-Hobbs, *Instructor in Voice and Public School Music, Director of the Chorus and Glee Clubs.*

Cardiff Normal College, Wales, Teacher's Diploma, four-year course, 1895; University of South Wales and Monmouthshire, Post-graduate Student in Education and Music, 1895-97; Arcadia University, Wolfville, Nova Scotia, Instructor in Voice and Chorus, 1918-20; Stanstead College, Stanstead, Quebec, Instructor in Voice and Chorus, 1920-22; LaGrange College for Women, Georgia, Director of Music and Professor of Voice, Harmony, and Public School Methods, 1922-26; Witworth College, Brookhaven, Mississippi, Head of Voice and Public School Music Department, 1926-27.

Herbert Nelson Hooven, *Instructor in Art.*

Pennsylvania Museum and School of Industrial Art, Certificate, 1917; Pennsylvania Academy of Fine Arts, Student, 1920-21; Chestnut Hill Academy, Philadelphia, Instructor in Fine Arts, 1924-25; University of Michigan, Instructor in Fine Arts, 1926-27.

Marjorie Elizabeth Hough, M. A., *Instructor in French.*

Cornell College, B.A., 1920; Columbia University, M.A., 1923; ibid; Lydia C. Roberts Fellow, 1922-23; Rochester Junior College, Rochester, Minnesota, Instructor in French, 1923-26; University of Minnesota, Extension Division, Instructor in French, 1925-26; University of Poitiers, Tours, France, Student, summer, 1926.

Mervin G. Humphrey, B.S., *Instructor in Economics.*

Valparaiso University, B. S., 1922; Certified Public Accountant, (Indiana), 1922; Hammond, Indiana, Accountant, 1924-25.

Fred Henry Kaufmann, M.S., *Instructor in Botany.*

University of Wisconsin, B.S., 1925; Michigan State College, Assistant, 1925-26; ibid., M.S., 1926; State Teachers College of Arkansas, Agronomist, 1926-27.

Anna Winans Kenny, Ph.B., *Instructor in Education.*

Valparaiso University, A.B., 1922; University of Chicago, Ph.B., 1925; ibid., Graduate Student, 1925-27.

Henry Herman Kumnick, A.B., LL.B., *Instructor in Law and Religion.*

Concordia Theological Seminary, St. Louis, Graduate, 1914; University of Montana, A.B., 1922; ibid., LL.B., 1924.

Carl William Lauritzen, B.S. in E.E., *Instructor in Electrical Engineering.*

University of Minnesota, B.S. in E.E., 1924; University of Arkansas, Instructor in Electrical Engineering, 1925-26.

Alfred Herman Meyer, A.M., *Instructor in Geology and Zoology.*

University of Illinois, A.B., 1921; ibid., A.M., 1923; Illinois State Geological Survey, Assistant Geologist, 1922; University of Chicago, Graduate Student, summers, 1924 and 1926; Northwestern University, Graduate Student, summer, 1927.

Frank Bruno Miller, M. Ed., *Instructor in Education and Psychology.*

Concordia Teachers College, River Forest, Illinois. Graduate, 1913; University of Akron, B.E., 1925; ibid., M.Ed., 1927; University of Chicago, Graduate Student, summer, 1927.

Walther Martin Miller, M.A., *Instructor in German.*

Concordia Theological Seminary, St. Louis, Graduate, 1919; Harvard University, M.A., 1922; ibid., Instructor in German, 1920-23; Concordia College, Fort Wayne, Instructor in German, 1923-26; Indiana University, Extension Division, Instructor in German, 1925-26.

Herbert Fred W. Moeller, A.M., *Instructor in English.*

Concordia Theological Seminary, St. Louis, Graduate, 1919; Concordia Teachers' College, River Forest, Illinois, Instructor in English, 1919-21; American Conservatory, Chicago, student, 1919-21; University of Nebraska, Assistant in English, 1921-22; ibid., A.M., 1922; Washington University, St. Louis, Graduate Student, summer, 1925.

Conrad Stephen Moll, B.P.E., *Instructor in Physical Education.*

Concordia Junior College, Fort Wayne, Graduate, 1918; Chicago Y. M. C. A. College, B.P.E., 1925; Y. M. C. A., Fort Wayne, Assistant Physical Director, 1921-22; Y. M. C. A., Oak Park, Illinois, Swimming Director, 1922-23; Englewood M. E. and New England Churches, Chicago, Athletic Director, 1923-24; Bankers' League, Basketball Official, 1924-25; Y. M. C. A., Burlington, Iowa, Physical Director, 1925-26.

Georgia Anthony Roller, A.B., *Instructor in English.*

University of Kansas, A.B., 1922.

Edna Marie Seebach, B.S., *Instructor in Home Economics.*
University of Minnesota, B.S., 1924.

Margaret Lillian Seidel, Graduate in Music., *Instructor in Violin and Piano. Director of the Orchestra and Band.*
Northwestern University School of Music, Graduate, 1923; Mississippi Woman's College, Hattiesburg, Mississippi, Head of Violin Department; Instructor in Piano and Director of Orchestra, 1923-24; Frances Shimer School, Mount Carroll, Illinois, Head of Violin Department and Instructor in Piano, 1924-27.

Moses Walter Uban, A.B., *Instructor in Engineering and Machine Shop.*
Valparaiso University, A.B. in Education, 1922; University of Chicago, Graduate Student, summers, 1922, 1927.

Arthur Hoyt Uhl, M.S., *Instructor in Pharmacognosy.*
University of Wisconsin, Ph.G., 1921; ibid., B.S. in Pharmacy, 1925; ibid., M.S. in Pharmaceutical and Plant Chemistry; ibid., Assistant Instructor, 1926-27.

Blanche Evelyn Welch, B.C.S., *Instructor in Economics.*
Bay Pathe Institute, Springfield, Massachusetts, Graduate, 1908; New York University, B.C.S., 1914; ibid., Student, 1915-16; University of Michigan, Student, summer, 1916; Valparaiso University, B. S., 1925; Royal Insurance Company, New York, Assistant Head, Bordeaux Department, 1914; Federal Reserve Bank, New York, Auditor and Supervisor in Collection Department, 1917-22.

Irvin Andrews Wills, B.S., *Instructor in Zoology.*
Wheaton College, Illinois, B.S., 1927.

Myers Elwood Zimmerman, A.B., *Instructor in Shorthand, Typewriting, and Penmanship.*
Valparaiso University, A.B. in Education, 1921.

Edgerton William Agar, LL.B., B.S., *Part-time Instructor in Education and Economics.*
Valparaiso University, LL.B., 1897; Northern Indiana Normal School, B.S., 1898.

August Bucci, *Part-time Instructor in Trumpet and Trombone.*
Chicago Conservatory, Student of Noah Tarantino.

Arthur B. Harlan, *Part-time Instructor in Clarinet.*
Valparaiso University, Student in Music, 1921-22; United States Veterans Bureau, School of Music, Student, 1923-25.

William McKinley Dorney, B.S., *Assistant in Physics.*
Valparaiso University, B.S., 1923.

Elizabeth Anna Marie Rechenberg, A.B., *Assistant in Botany.*
Valparaiso University, A.B., 1921; Indiana University, Graduate Student, summer 1926 and 1927.

CRITIC TEACHERS

Helen Mabel Benney, Ph.B., *Training Teacher of English, Valparaiso High School.*
University of Chicago, Ph.B., 1903; ibid., Extension Division, 1923-25.

Joseph Beasley Brown, A.B., *Training Teacher of Manual Arts and Coach, Valparaiso High School.*
Indiana State Normal School, A.B., 1923; University of Illinois, Graduate Student, 1924; Indiana University, Extension Division, Graduate Student, 1925-26.

Lillian Emma Darby, B.P.S.M., *Director of Music, Public Schools, Valparaiso.*
American Conservatory of Music, Chicago, B.P.S.M., 1921; ibid., Graduate Student, 1922-23.

Homer Marion Jessee, A.B., *Training Teacher of Mathematics and Principal of Valpairaiso High School.*
Valparaiso University, B.S., 1920; Indiana State Normal School, A.B., 1920; University of Chicago, Graduate Student, summers, 1925 and 1926.

Claude Owen Pauley, A.B., *Training Teacher of Science, Valparaiso High School.*
Indiana State Normal School, Graduate, 1915; University of Chicago, A.B., 1925.

Frieda Aldinger Schenck, Ph.B., *Training Teacher of Mathematics, Valparaiso High School.*
University of Chicago, Ph.B., 1923; ibid., Extension Division, Graduate Student, 1924.

Ralph Eugene Schenck, M.A., *Training Teacher of History and Commercial Subjects, Valparaiso High School.*
Indiana State Normal School, A.B., 1917; University of Chicago, M.A., 1927.

Hazel Dell Sowers, B.S., *Training Teacher of Arithmetic and History, Seventh Grade, Valparaiso Junior High School.*
Valparaiso University, B.S., 1925; Muncie National Institute, Training Teacher, 1912-13.

Miriam Maude Taylor, Ph.B., *Training Teacher of English, Eighth Grade, Valparaiso Junior High School.*
Earlham College, Richmond, Indiana; A.B., 1901; University of Chicago, Ph.B., 1914; ibid., Graduate Student, 1927; University of California, Graduate Student, 1927.

Maude Thomas, Ph.B., *Training Teacher, First Grade, Columbia School, Valparaiso.*
DePauw University, Greencastle, Indiana, Ph.B., 1904; Indiana University, Extension Division, Graduate Student, 1924.

Naomi Turner, *Training Teacher, Fourth Grade, Banta School, Valparaiso.*
Indiana State Normal School, Student, 1911-14; Indiana University, Student, summers, 1922-25, 1927.

Edith Helen Weems, A.B., *Training Teacher of Home Economics, Valparaiso High School.*
Valparaiso University, A.B., 1921; University of Chicago, Graduate Student, summers, 1922-25.

Russell Harrison White, A.B., *Principal of Valparaiso Junior High School.*
Central Normal College, Danville, Indiana, A.B., 1927.

PART II

GENERAL INFORMATION

THE AIMS OF THE UNIVERSITY

Valparaiso University is committed to an ideal in education according to which the development of character is intended to keep pace with the growth of the student's physical and intellectual powers. While the University aims, therefore, to impart knowledge and to improve skill, its prime objective is to inspire and to train the student to use his increasing powers not for himself only, but also for others and to put the Christian motive into his service.

With this objective always in view, the student is given a thorough survey of the material and social world during his freshman and sophomore years in order that he may have, first of all, a basic and a wholesome appreciation of past contributions to civilization. Upon this foundation of general understanding and culture there is built a definite course of study in some chosen specialization during the student's junior and senior years or during his years of professional training.

Accordingly, Valparaiso's invitation is directed to parents and prospective students who have a definite and serious purpose in providing, respectively in securing, a liberal education.

Students of all denominations are welcomed.

LOCATION

The University is located at Valparaiso, Indiana, forty-four miles southeast of Chicago. Valparaiso is a city of some ten thousand inhabitants; it is the county seat of Porter County and is in a thriving agricultural region adjoining the populous industrial communities centering about Chicago. Gary, Hammond, Indiana Harbor, Whiting, Michigan City, La Porte, and South Bend are within easy reach. The Lincoln Highway and the Yellowstone Trail give easy access to the city for those who travel by automobile. Three railroads, the Pennsylvania, the Grand Trunk, and the Nickel Plate give Valparaiso service better than that boasted by many larger communities. Excellent commutation service is maintained with Chicago. An electric interurban line links the city with Gary.

The city is beautifully located approximately on the crest of what is called the Valparaiso Terminal Moraine, the highest ridge in Northern Indiana, which acts as the watershed between the Great Lakes-St. Lawrence and the Mississippi drainage system. From College Hill, a knoll rising to an elevation of about 790 feet above sea level at the southeastern edge of the city, where the University buildings are grouped, the view to the south, in the direction of the Kankakee River and its famous marshes, is especially beautiful. Sager's Lake, which lies in this direction, is a particularly favored spot. Toward the north, the Sand Dunes are of unusual interest as natural formations of great geologic, biologic, and scenic interest.

Very unusual opportunities are offered to students of Geology, Botany, and Zoology in the natural laboratories provided by the desert conditions of the dunes, and by the abundance of water and aquatic plants and animals in the intermorainal and interdunal pockets on either

side of the main ridge. Furthermore, the nearness of the Calumet industrial region and the exceptionally central location of the University with respect to Chicago, Detroit, and Indianapolis, make this an especially favored school from the standpoint of the applied sciences, both physical and social, as well as from that of the commercial studies. Inspection trips, for instance, to the Field Museum of Chicago, to the Steel Mills of Gary, and to the Dunes State Park, form a regular part of the course of study in the several departments.

From a residential point of view, Valparaiso offers many advantages lacking in the great cities: abundance of pure air, broad shaded streets, and open country within a fifteen minutes' walk from the business district. As a place for the training of youth, Valparaiso offers advantages superior in many respects to those of the big city, removed as it is from many disturbing influences.

WHAT IT COSTS TO ATTEND VALPARAISO

GENERAL FEES AND EXPENSES

The total expense (Fees, board, and room) to a student for one year, exclusive of railroad fare, clothing, and personal expenses, need not exceed $250 for each semester.

The fees *for the year,* exclusive of laboratory fees, amount to $180.00, distributed as follows:

Tuition	$150.00
Health	2.00
Library	5.00
Lecture and Concert	6.00
Athletic	9.00
The Record	5.00
The Torch	3.00
	$180.00

(For laboratory, music, and typewriting fees see information given under the respective departments and courses.)

Tuition fee.—The total for a semester is $75.00, for the year $150.00. The tuition for each semester is payable strictly in advance. In case of formal withdrawal, the tuition is refundable as follows: Two-thirds until two weeks and one-third until ten weeks after the opening of a semester.

Health fee.—The health fee is charged all students except those who reside in Valparaiso with their parents and are under the care of their own family physician. The health fee secures free attention from the University physician during his office hours.

Library, Lecture and Concert fees.—The Library fee admits the student to the Library, the Lecture and Concert fee to all University affairs.

Athletic fee.—Admission to all intercollegiate contests during the year is secured by the athletic fee.

Fees for "The Record" and "The Torch."—In return for these fees the student receives the University annual and the University weekly newspaper.

Auditor's Fee.—$5.00 per credit hour.

SPECIAL FEES

Condition Examination.—$3.00.

Condition subjects fee.—(See regulations covering admission to the freshman class.) Students entering with a condition in a high school subject are assessed, as follows, for each course in progress: One student in class, $20.00; two students, $12.00; three students, $8.50; four students, $7.00; five students, $6.00; six students, $5.00.

Change in Program.—$1.00, unless the change is required by the University.

Graduation.—$10.00.

Late Registration.—$1.00 for first day after registration and fifty cents per day additional thereafter until the close of the second week.

Make-up or Special Examination.—$1.00.

Matriculation.—$5.00. This fee is payable once only, when the student is admitted to the University, and is not returnable.

ROOMS

Rooms for women may be had for from $35.00 to $50.00 per semester. Rooms for men range from $30.00 to $50.00 per semester. Bed linens and blankets are not included at these prices.

BOARD

Excellent board may be had at the University Commons for $85.00 per semester. Students remaining at the University during the holiday vacations will be charged a proportionate amount for table service during these periods.

VALPARAISO UNIVERSITY ASSOCIATION, PAYEE

Checks and money orders should be made payable to the Valparaiso University Association.

CARE OF STUDENTS

Routine of Matriculation and Registration—Upon reaching Valparaiso students should come direct to the Administrative Offices of the University. Here all the necessary information will be supplied respecting registration, rooms, and board. Students should not contract for rooms before consulting the University authorities.

Living Accommodations—The men's dormitory is Lembke Hall. It is a spacious structure with two wings, North and South Lembke, and is

set aside principally for freshmen students. Other college men may also elect to live there. Its accommodations include parlor, clubrooms, some rooms for single students, and a large number of two-room suites for two students. The rooms are furnished, with the exception of curtains, towels, and bedding. All non-resident freshmen are required to reside in Lembke Hall.

Altruria Hall is the dormitory for women. It contains a spacious reception hall where women students may gather for social affairs. Most rooms accommodate two girls; some rooms are single. The rooms are furnished, with the exception of curtains, towels, and bedding. Non-resident women students are required to live at Altruria Hall. No deviation from this rule can be permitted except after a thorough investigation by the Dean of Students, to whom written application must be made with a full statement of the circumstances.

Besides Lembke Hall, additional quarters for men may be secured in houses near the University, provided they are on the approved list which is kept on file in the office of the Dean of Students.

Both Lembke and Altruria Halls, as well as all rooming houses, are under the care of matrons who reside in them.

University women and men in their freshmen year who cannot be accommodated in their respective halls will be assigned to other rooms until space becomes available in the halls.

University Commons—The University Commons are located in Altruria Hall and are able to provide meals for a large number of students. All non-resident freshmen are required to eat at the commons.

Medical Supervision—The University assumes, so far as possible, the responsibility of safeguarding the health of students. It encourages them to maintain a high degree of physical fitness. All students are free to consult the University physician during his daily office hours without extra charge.

Religious Influence—The religious work of the University is under the direction of the Dean of Students. Chapel services are conducted daily from 10:30 to 11 A. M. during the regular scholastic year. Attendance is optional, but students are encouraged to participate in these inspirational services.

Every courtesy is extended to city pastors to enable them to remain in touch with their respective students.

Standards of Life—Matters of conduct are also in the hands of the Dean of Students. Close supervision of all social recreation is maintained by his office.

A student whose general attitude is unsatisfactory or whose influence is considered detrimental may be requested to withdraw from the University at any time, or he may be refused readmission to the University at the beginning of any semester.

The rules and regulations which have proved beneficial to the life of the University community will be found in the "Valparaiso University Handbook."

The Advisory System—It is the aim of the Administration to remain in close touch with each student. Hence, each student is given a provisional faculty adviser at the time of his admission. As soon as he has selected his major study, he is assigned to the adviser in the department of his major study.

Each adviser aims to know personally every student in his division. He tries to note the special abilities of each student and on the basis of such observation guides him in the arrangement of his schedule so that he may choose the right field of concentration and subsequently meet all the requirements for graduation in the proper sequence. The adviser constantly encourages the student to strive for excellence and high standards of performance.

The advisers meet with the Dean of the University at stated intervals and make reports to him every nine weeks.

THE INSTITUTION

HISTORY AND GOVERNMENT

The origin of Valparaiso University dates back to the days before the Civil War when, on the 21st of September, 1859, the Valparaiso Male and Female College, a Methodist school, opened its doors with seventy-five students and a faculty of six members. Housed at first in a temporary building where Music Hall now stands, the school prospered so well that the following year a substantial brick building, the historic Old College Building, was erected. The outbreak of the Civil War resulted disastrously for the new institution. Loss of students and financial distress finally caused the college to suspend classes in 1869.

On September 16, 1873, however, Henry Baker Brown, a professor of Mathematics, reopened the old college, under the name of the Northern Indiana Normal School and Business Institute, with five teachers and thirty-five students. Mr. Brown possessed qualities of organization and leadership that quickly brought success to his venture. In 1881 Mr. Brown was joined by Mr. Oliver Perry Kinsey, who became Vice-President of the institution.

In 1900 the name of the school was changed to Valparaiso College and in 1907 to Valparaiso University. President Brown and Mr. Kinsey had planned to turn the institution over to a self-perpetuating board of trustees. But these plans did not immediately mature. Mr. Brown's death intervened on September 16, 1917. Two years later, in May, 1919, Mr. Kinsey retired to a well-earned rest at the age of seventy.

In the fall of 1925 the Lutheran University Association, an Indiana corporation, was prevailed upon to take over and to continue the University. This Association now controls the physical plant of the University and manages the endowment. From its membership are chosen the officers of the Valparaiso University Association, which directs the University as its governing body.

BUILDINGS AND EQUIPMENT

The University occupies a number of commodious buildings, grouped in the neighborhood of University Place.

The Auditorium is on the west side of College Avenue. The ground floor contains the office of the registrar, several classrooms, and some departmental offices. The second floor has a splendid auditorium with a seating capacity of about fifteen hundred.

Music Hall, a three-story building, is directly opposite the Auditorium. It contains the University administrative offices, a number of studios, harmony and recital halls, and many private practice rooms.

Science Hall faces north and is opposite the Auditorium on University Place. The ground floor contains the physics laboratory and work shop, a large chemical laboratory, and the general stock room. The first floor contains the lecture rooms for physics and chemistry, the analytical laboratory, weighing room, offices for the chemistry and physics departments, and a research laboratory. The second floor houses the College of Pharmacy with its offices, a large pharmacy and dispensing laboratory, a pharmacognosy laboratory, and several lecture rooms.

Immediately west of Science Hall is the Biology Building, containing a number of class rooms and three well-equipped laboratories for botany, geology, and zoology.

The University Library is housed in a building north of the Auditorium, on College Avenue. It contains 15,000 volumes and subscribes for approximately 150 periodicals.

Commerce Hall, a most modern building, is north of the Library, at the intersection of College Avenue and Freeman Street. This building houses the Department of Home Economics on the ground floor, the School of Law with its library on the first floor, and several departments of the College of Liberal Arts on the second and third floors.

The Engineering Building is used exclusively for Civil, Electrical, and Mechanical Engineering and for Industrial Arts. There are extensive machine shops, electrical laboratories, wood working shops, drafting rooms, testing laboratories, foundries, a modern power plant, etc.

Plans are well under way for the speedy erection of a new and thoroughly modern field house to replace the building which was destroyed by fire this past winter. In the meantime, adequate arrangements have been made with the Public School authorities for the use of their new and commodious High School Gymnasium. Brown Field is well equipped for outdoor athletics. Its new tennis courts deserve special mention. The field is located near the University, on a large tract of land which is reserved for additions to the main university plant.

Grounds, buildings, and equipment are appraised at more than $900,000 by the American Appraisal Company.

STUDENT ACTIVITIES

The University is a member of the Indiana Athletic Conference and encourages a program of both intercollegiate and intramural athletics.

The usual number of departmental, musical, and similar organizations are found on the campus. These serve to give the student ample opportunity for cooperation and expression.

The University also aims to provide entertainment and inspiration through special lectures and through concerts. Outside speakers and artists are as a rule engaged for this purpose.

PART III

ADMINISTRATIVE PROCEDURE

ADMISSION

The Academic Year—The College of Liberal Arts has both a Long Session and a Summer Session. The College of Pharmacy and the School of Law have only a Long Session. The Long Session includes two semesters, the first beginning September 20th and ending February 9th; the second beginning February 11th and ending June 14th.

REGISTRATION

Registration Days—For the Long Session of 1928-29 the registration days are as follows:

First semester: Thursday, September 20th, for the registration of Freshmen; Friday, September 21st, for the registration of all other students.

Second semester: Monday, February 11th.

Control Over Admission—Admission to the University is under the control of the registrar.

Methods of Admission—An application blank may be secured by addressing the registrar. This should be filled out and forwarded to the registrar of the University who will then tell the student what to do. A student's credentials must be approved by the registrar before his registration is complete. High School certificates and other credentials should be filed as early as possible. All certificates upon which admission is granted become the property of the University and are preserved in its permanent files.

Late Registration—The student must pay an additional fee for late registration. No student will be allowed to enter for credit after 12:00 M. Saturday, October 6th in the first semester, or 12:00 M., Saturday, February 23rd in the second semester.

Responsibility of Students upon Registration—In registering, the student subscribes to the terms and conditions, financial and otherwise, specified in these announcements.

Change in Program—For changes in the student's program two weeks after the regular registration days, a fee of $1 will be charged for each subject changed, unless the change is required by the University. Changes will be made only when approved by the student's adviser.

Attendance on Courses as Visitors—Attendance by a registered student as a visitor in a course for which he is not registered is allowed only with the approval of his adviser.

Transfer—If a student transfers from one program of study to another, as for instance, from Pharmacy to Law or from Engineering to Education, all requirements of the new specialization must be met. Such a transfer will subject credits previously earned to a re-evaluation. In certain cases the change of program may result in some loss of credit. Such transfers should, therefore, not be made without the written approval of the advisers concerned.

Withdrawal—A student who wishes to withdraw from the University for the remainder of a session should apply for permission to his adviser and to the Dean of Students. Upon presentation of the permit, the registrar will issue an order for the return of such fees as are returnable. In every case the parent or guardian is notified of the withdrawal by the Dean of Students.

The term "honorable dismissal" refers to conduct and character only, not to class standing and grades. It will not be granted unless the student's conduct and character are such as would entitle him to continue in the University.

On withdrawal every student is entitled to a transcript which contains all the important facts pertaining to his admission, classification, and scholarship.

ADMISSION TO THE FRESHMAN CLASS

General Entrance Requirements—Students with acceptable scholastic records from accredited high schools and satisfactory recommendations will be admitted as:

(a) Freshmen, if they present fifteen suitable units earned in grades IX, X, XI, XII.

(b) Freshmen, if they present twelve suitable units earned in grades X, XI, and XII.

(c) Conditioned freshmen, if they are able to present fifteen units, but lack no more than one unit of the specified entrance requirements. This deficiency must be removed during the freshman year.

Accredited High Schools—The University accepts as its list of accredited high schools the lists prepared by the high school inspectors of the various States, and those approved by the North Central Association or by accrediting associations of the same standing. Graduates of non-accredited high schools should communicate with the registrar who will present their application to the Committee on Admissions. Students are admitted from such schools only on condition that their work proves satisfactory.

Definition of Unit—One unit represents the completion of a year's work in a given subject, with daily recitations of 45 minutes each, for a school session of at least 36 weeks.

Required Entrance Units—The high school transcript must show a minimum of fifteen units of work, distributed as follows, with exceptions as noted:

1. *English*
   - (a) *Composition ..... 1 Unit
   - (b) Elementary Rhetoric ..... 1 Unit
   - (c) American or English Literature or both..... 1 Unit
2. *Mathematics*†
   - (a) *Algebra ..... 1 Unit
   - (b) Plane Geometry ..... 1 Unit

   (Two units in unified mathematics may be substituted.)

*These subjects may be taken in Junior High Schools, but do not reduce the requirements of twelve units for Senior High School students.

3. *Two elective groups,* each of not less than 2 units selected from:
   (a) *One foreign Language—French, German, Spanish, Latin or Greek.
   (b) Social Studies, including History or Bible.
   (c) Natural Science.
   (d) Practical and Fine Arts. Not more than four units.
4. *Electives,* to make a total of:
   (a) Fifteen units for regular four year high school students.
   (b) Twelve units for three year students from Senior High Schools.

Foreign Students—Students from approved schools in foreign countries will be admitted under the same general conditions as those from American schools, provided they have a sufficient working knowledge of English to enable them successfully to carry regular work.

Admission as Special Students—Persons are admitted as special students under the following conditions: (1) They must be prepared to do the work desired, and give good reason for not taking the regular course; (2) They must be at least twenty-one years of age.

Special students are not admitted to the School of Law.

Admission to Advanced Standing.—Estimates of advanced standing will be made only when official transcripts of studies pursued are presented. Arrangements must be made with the registrar for any advanced credit not later than the first registration day. Any advanced standing granted is provisional; it is conditioned upon the ability of the candidate to pursue the advanced courses which he enters.

To be accepted from another college the student must show by his transcript that he has been honorably dismissed and that he has attained at least a C average in his studies.

College credit, not in excess of thirty-two semester hours a year, will be given for equivalent college courses.

EXAMINATIONS AND STANDING

Regular Examinations—The regular written examinations of the University are held at the close of each semester. Each examination is usually limited to three hours; in the School of Law they are extended to four.

In addition to the regular prescribed examinations, written tests are given from time to time, at the discretion of the instructors.

The semester examinations are conducted according to a published schedule.

Special Examinations—Special examinations are given only to conditioned (grade E) students and to students who for adequate reasons have not been able to be present at regular examinations or written tests. The privilege of special examination is granted by the adviser on recommendation of the instructor. A condition grade of E must be removed by special examination during the next academic year.

†For admission to Engineering, freshmen must produce ½ unit additional in algebra, also ½ unit additional in solid geometry.

The student is charged a fee of $1 for each special examination or written test. This fee must be paid before the examination can be given by the instructor.

STANDING OF STUDENTS

Marking System—Results of work will be recorded in the registrar's office as follows:

A. Exceptionally high quality, valued at three (3) quality points for each credit.

B. Good, valued at two (2) quality points for each credit.

C. Fair, valued at one (1) quality point for each credit.

D. Unsatisfactory; indicates a deficiency and gives no quality points, but gives credit for graduation if with such credits the student's standing is one (1) or more.

E. Condition grade. Requires special examination for its removal; otherwise it becomes an F automatically.

F. Failure, valued at 0 credits and 0 quality points.

I. Incomplete.

W. Authorized withdrawal.

X. Absent from examination.

Definition of the Standing of a Student—A student's standing is determined by the ratio of his total number of quality points to his total number of credits. Thus, a student who makes an average mark of C throughout his course of 124 semester hours will have 124 quality points and 124 credits, and a standing of one. An average mark of B will give the student 248 quality points and 124 credits and a standing of two. When a semester's work is to be considered, "standing" is understood to be the ratio of the number of quality points gained to the number of credits scheduled.

Passing Grade. Any student who does not maintain a passing grade in at least three three-hour courses or the equivalent will be requested to withdraw from the University. In the case of a freshman this rule may be waived by the Committee on Scholarship upon the recommendation of the adviser.

AMOUNT OF WORK

Credit Hour—A credit represents one hour of recitation or lecture, or two or more hours of laboratory a week for one semester. If time outside of the laboratory is required to prepare laboratory notes, two hours may be equivalent to one hour of class work. Drawing, shopwork, physical education, and other courses demanding no outside preparation require a minimum of three hours for one credit. For the exact number of hours see the respective courses.

Amount of Credit per Semester—The average amount of work regularly required of each student is fifteen hours a week, exclusive of physical education.

No regular student may register for less than twelve, nor more than eighteen hours, exclusive of physical education. No student of a college of this University except he be a student in Engineering, may register for

more than sixteen, or for less than fourteen hours, unless by special permission of the Committee on Scholarship. This permission will be granted only on written application before registration is completed. To be eligible to carry extra work, the student must have a standing of at least two for the preceding semester. Freshmen will not be allowed to carry extra work. If additional work is taken with the consent of the Committee on Scholarship, it must be dropped, whenever the student's work proves unsatisfactory. A standing of 1.5 is to be maintained by the student in all subjects, or sixteen credits only will be granted, no matter how many hours are passed in class.

Number of credit hours students may take each semester without petition—

College of Liberal Arts:
In all departments except Engineering.....Maximum, 16 credits
In Civil, Electrical, and Mechanical Engineering.Maximum, 18 credits
College of Pharmacy .....Maximum, 16 credits
School of Law .....Maximum, 15 credits

GRADE REPORTS

Semester Reports from the Registrar—Reports are sent out to parents and guardians of all students in the University at the end of each semester. Self-supporting students over 21 years of age may receive their reports instead of their parents, if they so request in writing.

Intra-semester Reports from the Adviser—On November 1st, December 15th, March 19th, and May 1st, the advisers send out the reports of students whose grades fall below the passing mark (C) both to the students themselves and to their parents or guardians. On December 15th tentative grades for all students are sent to the advisers.

CLASSIFICATION OF STUDENTS

A student is classified according to the number of credits and quality points earned toward the degree. The following credits and quality points are needed for classification of students:

Admission to freshman class: 15 entrance units.

Admission to sophomore class: At least 24 credits and 18 quality points, or registration in courses amounting to 54 credits at the end of the academic year.

Admission to junior class: At least 54 credits and 50 quality points, or registration in courses amounting to 88 credits at the end of the academic year.

Admission to senior class: At least 88 credits and 88 quality points and registration in courses amounting to 124 credits at the end of the academic year.

GRADUATION

Degrees—Upon the recommendation of the faculty of the College of Liberal Arts the University confers the degree of Bachelor of Arts, Bachelor of Science in Engineering, and Bachelor of Music. Upon recommendation of the faculty of the College of Pharmacy the University confers the degree of Pharmaceutical Chemist and the degree of Bachelor

of Science in Pharmacy. Upon recommendation of the faculty of the School of Law the University confers the degree of Bachelor of Law. In all cases the student is responsible for meeting the requirements for graduation.

General Requirements for Degrees—1. The minimum number of credits and quality points required for graduation varies with the courses chosen, as shown in the following summary. Candidates for degrees must meet the requirements both in number and kind of credits, as outlined in the catalog for the year of matriculation, or for the year of graduation, except that students who withdraw from the University for one semester or longer, will be graduated for the year in which they re-enter.

Degrees	Credits Required	Quality Points Required
Bachelor of Arts		
In all departments	124	124
Bachelor of Science in Engineering		
Civil Engineering	140	140
Electrical Engineering	140	140
Mechanical Engineering	140	140
Bachelor of Music	124	124
Pharmaceutical Chemist	96	96
Bachelor of Science in Pharmacy	124	124
Bachelor of Laws	86	86

2. All work toward a degree must have been completed to the satisfaction of the faculty recommending the degree.

3. Candidates for degrees must, except as noted elsewhere, spend at least the last year of work required for a degree in residence.

4. Candidates for graduation must make formal application when registering for their last semester's work. The graduation fee must accompany the application.

5. A candidate must be present at Commencement in order to receive his degree. Degrees are not conferred *in absentia,* except on special permission from the President.

6. A student who completes his work toward a degree in the Summer Session may be granted his degree at the end of that session.

Degrees With Distinction—Two grades of honors are conferred upon candidates at graduation:

(1) Students who attain to a standing of 2.6 up to 3 are graduated "With High Distinction." They must have been in attendance at least three years.

(2) Students who attain to a standing of 2.4 up to 2.6 are graduated "With Distinction."

A student who has been in attendance only for his last two years may also receive these honors, provided he attains to a standing of .2 greater than the above named.

Class Honors in Scholarship—The requirements for class honors in scholarship are as follows:

(1) The student must have removed all conditions.

(2) He must have been registered for at least fourteen hours of work per semester, exclusive of physical education.

(3) For freshmen honors the student must secure an average of 2 points per credit hour; for sophomore honors, an average of 2.3 points; for junior honors, an average of 2.4 points; for senior honors, an average of 2.5 points.

Freshmen reaching the required standard of excellence receive *Honorable Mention;* sophomores, juniors, and seniors are recognized as *Sophomore, Junior, and Senior Scholars,* respectively. Senior honors are awarded at Commencement; freshmen, sophomore, and junior honors at an Honor Assembly which is held in the fall.

PART IV

THE COLLEGE OF LIBERAL ARTS

DEGREES OFFERED IN THE COLLEGE OF LIBERAL ARTS

The following degrees are offered in the College of Liberal Arts: The degree of Bachelor of Arts in all departments except Engineering, the degree of Bachelor of Science in the Department of Engineering, and the degree of Bachelor of Music in the Department of Fine Arts.

Majors leading to the degree of Bachelor of Arts may be taken in the following departments: Botany; Business Management; Chemistry; Education, Philosophy, and Psychology; Engineering (In Industrial Arts only); English Language and Literature; Fine Arts (Art and Music); Foreign Languages and Literatures (French, German, Latin, and Spanish); Geology; Home Economics; Mathematics and Physics; Social Sciences (Economics, History, Political Science, and Sociology); Zoology.

Majors leading to the degree of Bachelor of Science may be taken in Civil, Mechanical, and Electrical Engineering.

THE BACHELOR OF ARTS CURRICULUM

Essential features—The courses of study of the Bachelor of Arts curriculum provide a *general culture* unit and a *specialization* unit, that is, (1) in the freshman year orientation courses of fundamental educational value which build upon the high school curriculum, and (2) in the sophomore year introductory or survey courses, in varied fields or major avenues of service, as preliminary and prerequisite to specialization, and (3) in the junior and senior years the rather definite specialization in the narrower field of the student's primary and secondary interests. Hence the programs of study are divided into lower and upper divisions or into junior and senior college curricula.

I. THE JUNIOR COLLEGE CURRICULUM

(Freshman and Sophomore Years)

1. Required Subjects, or the Constant, of the Freshman Year

	Sem. I	Sem. II
English Language and Composition	3 cr.	3 cr.
*Orientation course in Social Science	3 cr.	3 cr.
*Orientation Course in Natural Science	3 cr.	3 cr.
*Freshman Lectures (The Psychology of Thinking and Studying, 1 credit; The Use of the Library, 1 credit)	1 cr.	1 cr.
Foreign Language	3 cr.	3 cr.
**Music Appreciation (Orientation) or Religion	2 cr.	
**Art appreciation (Orientation) or Religion		2 cr.
Personal Hygiene (each semester, 1 credit)	1 cr.	1 cr.
Physical Education (each semester, 2 hours)	0 cr.	0 cr.

*As a rule these courses are limited to freshmen and are not required of students entering after the freshman year. Such students must, however, substitute for the orientation courses 6 credits in Social Science, 6 credits in Natural Science and at least 3 credits in Fine Arts, or Philosophy, or Psychology, or Religion.

**Or electives for students in Music and Art.

2. Required Subjects, or the Constant, of the Sophomore Year

	Sem. I	Sem. II
Fundamentals of Speaking or The Bible and Civilization	1 cr.	1 cr.
Types of Literature and Composition	0–2 cr.	0–2 cr.
(These 4 additional credits in English are required only if no more than 3 units were presented upon entrance.)		
Physical Education	0 cr.	0 cr.

3. Required Prerequisites to Major and Minor Subjects
(Introductory courses or preliminary specialization.)

	Sem. I	Sem. II
Foreign Languages and Literatures, if elected for a major or minor	3 cr.	3 cr.
Social Science, if elected for a major or minor	3–6 cr.	3–6 cr.
Art, Literature, Mathematics, Music, Philosophy, Psychology, Religion, if elected for a major or minor	3–6 cr.	3–6 cr.
Natural Science, if elected for a major or minor	4–10 cr.	4–10 cr.

4. Enough electives in Sophomore or B Courses to make up a total of at least 60 credits by the close of the Sophomore Year

Foreign Language Requirements—Every student is required to complete, in freshman and sophomore years, 6 to 18 credits: 6 credits in the language pursued in high school, if 3 or more units of entrance or its equivalent are presented; 12 credits, if only 2 units of entrance are presented; 18 credits, the completion of 6 of which may be postponed to the junior year, if only 1 or no unit of entrance is presented.

No credit toward graduation will be granted for less than a full year's work in a beginning language. Neither can the language requirement be met by offering two different languages.

Social Science Requirements—6 credits in Economics, History, Political Science, or Sociology, if elected, are required; 12 credits, including 6 credits in History, if no entrance unit in History is presented.

Natural Science Requirements—8 credits at least in one subject: Botany, Chemistry, Geology, Physics, Physiology, or Zoology are required.

No credit towards graduation will be granted for less than a full year's work in a beginning science.

The requirements and courses of study for students who entered prior to September, 1928, will be found in the Announcements for 1927-28.

Postponement of the Performance of Sophomore Credits—The subjects named above must be completed before the beginning of the junior year, except that a sophomore student of Fine Arts, with the permission of his adviser, may postpone the performance of not more that six credit hours of History or Psychology to the junior year; any other sophomore student, with the permission of his adviser and the Committee on Scholarship, may defer not more than six credits of prescribed work to the junior year, provided this work does not conflict with prerequisites to a double major.

This outline of the junior college curriculum does not apply to pre-medical students or to students in Engineering.

II. THE SENIOR COLLEGE CURRICULUM

(Junior and Senior Years)

1. *Major Subject*—Each student selects some one subject of study as his major not later than the beginning of his sophomore year. In his major department he completes courses totaling not fewer than 24 credits, or more than 48 credits, of which at least 14 and 38 respectively must be courses marked C or D (courses not open to freshmen and sophomores). In the departmental statements under Courses of Instruction the specific requirements for a major and minor are outlined. Likewise, the approved related minors from which each student elects are there published.

2. *Minor Subject*—Each student also selects from one or two approved related departments courses totaling not fewer than 12 nor more than 24 credits, of which at least 6 and 14 respectively must be courses marked C or D.

3. *Choice in Major and Minor Subjects*—A major may consist of 48 credits; one major of 24 and a second major of 24 credits; a major of 36 and a minor of 12 credits; and a major of 24 and two minors of 12 credits each.

4. *Credits of C and D courses in Major and Minor Subjects*—At least a total of 30 credits of C and D courses are to be offered for graduation. Only sophomore credits of introductory courses may apply as prerequisites to major and minor subjects.

5. *Electives*—In addition to the work required above, sufficient electives are chosen to make a total of 124 credits in order to obtain the degree of Bachelor of Arts.

No credit is allowed for certain subjects unless pursued throughout the year, as announced. For example, in order to secure any credit in a beginning course in foreign language, a full year's work must be completed.

Electives in any department of the College of Liberal Arts, including certain courses in Art, Business Management, Education, Engineering, Household Arts, Industrial Arts, and Music, may be taken as well as certain courses in the School of Law during junior and senior years. The total of elective credits allowed in Engineering courses may not exceed 24 hours. Credit to the extent of four hours is allowed for applied music (piano, voice, etc.) after Music 57 and 58, and 59 and 60 (Harmony) have been completed. For every additional hour of applied music the student must elect an equal number of hours of theoretical music. The total amount of credit in music may not exceed 12 hours.

6. *Bachelor's Thesis*—A bachelor's thesis is not generally required. Students of high standing, however, are encouraged to write thesis in connection with their major studies. Credit toward the degree is given for thesis work only as part of the work in a thesis course for which the student is registered, and when such thesis is presented in prescribed form and duly approved by the head of the department in which it is written.

7. The schedule of courses of juniors and seniors must have the written approval of the adviser under whose guidance the student is doing

his major work. Not only the grouped work, but also all electives are chosen with the advice and approval of the major professor.

The Department of Zoology acts as adviser for *pre-dental, pre-medical,* and *pre-nursing* students; the Department of Social Science, for *pre-law* students; the Department of English Language and Literature, for students preparing for work in *library* and *journalism.*

PRE-PROFESSIONAL PROGRAMS

The entrance requirements to these courses are those of the College of Liberal Arts. The college requirements consist of 60 credits and 60 quality points.

Pre-Legal Program—Two years of work in the College of Liberal Arts of this University or of any approved college are necessary for admission to the School of Law. (See Part VI.) Students who take these preliminary years in this University are to conform to the regular requirements for freshmen and sophomores and to take such additional courses as may be suggested by the Department of Social Science.

Pre-Medical Program—A two-years' course preparing for the study of medicine is offered under the direction of the Department of Zoology. This course follows the requirements of the American Medical Association and the Association of American Medical Colleges for entrance to all class A medical schools, except those requiring a degree for entrance.

Preparation for Dentistry and Nursing—For preliminary requirements see under the Department of Zoology.

COMBINED PROGRAMS

Liberal Arts-Professional Courses—Students may do the entire work of their senior year in the School of Law of this University, or elsewhere in approved schools of *medicine* or *journalism* and receive the degree of Bachelor of Arts from this University under the following conditions:

(1) The junior year is to be completed in the College of Liberal Arts at this University. (2) The program selected and the school in which the work is to be completed must be recorded in the registrar's office. (3) All prescribed subjects in preparation for above schools, inclusive of any group requirements of this University, must be met before the student enters the professional school. (4) All requirements regarding the major subject are to be satisfied before the bachelor's degree is granted. (5) An application for graduation must be made and the usual graduation fee paid.

An official transcript of the year's work (30 semester hours or its equivalent), must be sent to the registrar at the close of the year. Upon receipt of such transcript the degree of Bachelor of Arts may be granted as if the work had been completed in residence in this University.

For the three-year program preparing for *Law* see the Department of Social Science; for the three-year program preparing for *Medicine,* see the Department of Zoology; for the three-year program preparing for *Journalism,* see the Department of English Language and Literature.

Six-Year Combined Liberal Arts-Law Program—A student may obtain in six years both the Bachelor of Arts and the Bachelor of Laws degrees. The program requires the completion of three full years of academic work in the Department of Social Science or in the Department of Business Management *(Business-Law Program),* before the course in the School of Law is begun. For approved outlines of this Arts-Law program, see respectively the Department of Social Science and the Department of Business Management.

A student who has been in residence at this University for his junior year, and has been careful to confine himself to the prescribed subjects and group requirements during his three years in the College of Liberal Arts, and has secured 98 credits and 98 quality points may be given the degree of Bachelor of Arts upon passing the prescribed examinations for the entire first year law work. He may then complete the requirements for the degree of Bachelor of Laws by two years of additional work in the School of Law.

The entrance requirements for this program are those of the College of Liberal Arts. The A.B. degree is granted upon the joint recommendation of the faculties of the College of Liberal Arts and of the School of Law at the end of the first year of Law, the LL.B. upon the recommendation of the faculty of the School of Law at the end of the third year of Law.

Five-Year Combined Liberal Arts and Social Work Program—There is an increasing call today for the following forms of social service: Work of charity organizations and of associated charities; work in social settlements; work in community centers and in paygrounds; work in prisons, reformatories, and other punitive or corrective institutions; work in homes and institutions for the defective and dependent; work in probation and other courts; child welfare work; medical or educational social work; welfare work in industrial and mercantile establishments; work of civic organizations.

The University offers a curriculum in Social Science (see under the Department of Social Science) which leads, at the end of the fourth year, to the degree of Bachelor of Arts, conferred upon recommendation of the faculty of the College of Liberal Arts. The work of the fifth year is secured in an approved School of Social Work and leads, at the end of that year, to appropriate certificates in social work.

The entrance requirements for this program are the same as those for the College of Liberal Arts; the college requirements toward the degree of Bachelor of Arts are 124 credits and 124 quality points.

Preparation for Library Science—See the Department of English Language and Literature.

THE BACHELOR OF SCIENCE CURRICULUM

The degree of Bachelor of Science of the College of Liberal Arts is offered only in the Department of Engineering, with a major respectively in civil, mechanical, and electrical engineering.

The curriculum for the first year is uniform in all branches of engineering. The courses given during this time—mathematics, mechanics, general inorganic chemistry, and engineering drawing—are regarded as a common foundation for engineering. The specialization of the curriculum in the various divisions of engineering is confined to the last three years.

Since the courses given in the various divisions of engineering vary to some extent in the second year, and diverge more and more in later years, the student who wishes to transfer from one division to another should do so at the beginning of his second year.

For an outline of the different programs in engineering, see the Department of Engineering.

DEPARTMENTS OF INSTRUCTION

STATEMENT OF COURSES, CURRICULA, AND PROGRAMS

For the convenience of the student who is making out his schedule of studies, courses and curricula are arranged alphabetically in the following statement:

CLASSIFICATION OF COURSES

To guide students in the proper sequence of subjects pursued in each department, courses are marked A, B, C, or D. The letter following the course number indicates, in general, its grade, as follows:

A—Such freshmen courses as are equivalent to work taken in high school. Seniors enrolled in these courses will receive only one-half credit; juniors only three-fourths credit.

B—More advanced courses: Open to freshmen and sophomores, requiring prerequisite high school courses in the same or similar subjects. Seniors enrolled in these courses will receive only three-fourths credit.

C—Courses requiring at least one year's college work in the same or kindred subjects, and regularly following after B courses.

D—Advanced courses: Requiring at least two years of prerequisite college training, regularly following after C courses. Only students classified as juniors or seniors may enroll in these courses.

Courses numbered from 1 to 50 are A courses, from 51 to 100 are B courses, from 101 to 150 are C courses, and from 151 to 199 D courses.

Yr. indicates a continuous course extending through two semesters. A final report will be made by the instructor at the end of each half-year.

ORIENTATION COURSES

1-2. ORIENTATION COURSE IN SOCIAL SCIENCE. (A) Yr. Each semester. Cr. 3.

A cooperative survey course in social science consisting of lectures, discussions, and recitations covering topics from the fields of economics, education, history, philosophy, political science, and sociology.

3-4. ORIENTATION COURSE IN NATURAL SCIENCE. (A) Yr. Each semester. Cr. 3.

A cooperative survey course in natural science, consisting of lectures, demonstrations, and recitations. Departments cooperating are: Botany, Chemistry, Geology, Mathematics, Physics, and Zoology. Some of the topics covered are: The nature of matter and energy, the nature of chemical processes, the plant kingdom, the animal kingdom, and human structure and development.

5. FRESHMAN LECTURE I: THE PSYCHOLOGY OF THINKING AND STUDYING. (A) Sem. 1. Cr. 1.

The chief topics discussed are: The processes of thinking, learning, studying, and note-taking. Other topics considered are: Collegiate life and work, the field of knowledge, and choosing a major.

6. FRESHMAN LECTURE II: USE OF THE LIBRARY. (A) Sem. 2. Cr. 1.

This course gives instruction and practice, through assignments and reports, in the use of the card catalog, decimal classification, periodical indexes, and reference books. Some topics covered are: A rapid survey of bibliography, great books, and sources for loaning books and pamphlet material.

7. ORIENTATION COURSE IN MUSIC APPRECIATION. (A) Sem. 1. Cr. 2.

A broad survey of the nature and development of music with the basis for their appreciative enjoyment.

8. ORIENTATION COURSE IN ART APPRECIATION. (A) Sem. 2. Cr. 2.

A study of color, balance, line, composition; a rapid survey of the history of art from the beginning to the present day.

THE DEPARTMENT OF BOTANY

The courses in botany provide a means of obtaining both a general and detailed knowledge of plants. Courses 1 and 2 are of considerable value to *all* students. These courses open the whole field of botanical science for a knowledge of fundamental biological laws, facts, and problems, and show man's great dependence on plants for food, clothing, shelter, medicine, and enjoyment. They form the basis for all advanced courses and represent the minimum of botanical training for teachers of high school botany.

The department also aims to train students for teaching botany in the higher institutions; to lay foundations for practical work in such branches as pharmacy, bacteriology, medicine, general agriculture, forestry, horticulture, landscape gardening, vegetable gardening, etc., and to prepare students for graduate work and research.

The material equipment of the department is being continually improved and extended. The location of the University in the lakes and dunes region of northwestern Indiana favors the department with a great variety of native plants, growing in water, sand, swamps, forests, and in the open prairies. Cranberry, pitcher-plant, cactus, pines, bog moss, and other plants requiring more or less special environmental conditions are found in the immediate vicinity.

Students who expect to major in botany should confer with the head of the department as early as possible in order to plan a desirable curriculum. Such students will ordinarily take the following courses: Botany 1, 2, 101, 119, 125, 131, 99, and elect other courses in botany, according to their needs, sufficient to make a major.

The student is advised to elect German or French in his freshman year.

Students electing botany as a minor will usually take botany 1, 2, 101 or 119, and preferably 131.

COURSES IN BOTANY

1. GENERAL BOTANY—(B) Sem. 1, 3+6, Cr. 5.

A general introductory course, prerequisite to all other courses in botany, considering the fundamental principles of botany, especially of the morphology and physiology of plants, and including references to their economic importance. A part of the laboratory work consists of a study of type forms representing all major plant groups.

Laboratory fee $4.00; *deposit* $2.00.

2. GENERAL MORPHOLOGY AND CLASSIFICATION OF PLANTS—(B) Sem. 2, 3+6, Cr. 5.

The collection, identification, classification, and preservation of plants. The entire plant kingdom is considered, but particular emphasis is placed upon the external morphology and classification of the ferns and seed plants, especially those of economic importance, including medicinal plants, farm crops, truck crops, forest trees, house and garden plants, ornamental trees and shrubs.

Prerequisite: Botany 1.
Laboratory fee $4.00; *deposit* $2.00.

90. THE TEACHING OF BOTANY—(D) Sem. 1 or 2, 1+2, Cr. 2.

Discussion of the aims and methods of teaching botany in secondary schools. Suggestions on and practice in collection, preservation, and preparation of materials for class use.

Prerequisite: Botany 2.
Laboratory fee $1.00; *deposit* $2.00.

99. SENIOR THESIS—(D) Year. Cr. 2.

It is very desirable that a subject be chosen before the end of the junior year. Consult head of the department.

Prerequisite: Major in Botany.
Laboratory fee $2.00; *deposit* $2.00.

101. PLANT ANATOMY—(C) Sem. 2, 3+4, Cr. 4.

The structure, growth, and development of vascular plants in relation to function are considered. This course particularly furnishes the proper basis for a study of plant physiology, diseases of seed plants, and a further study of morphology. Since a large amount of the material is histological in nature, and since the laboratory materials are drawn largely from medicinal and other economic plants, the course is of special value to pharmacy students.

Prerequisite: Botany 1, (Botany 2 desirable).
Laboratory fee $4.00; *deposit* $2.00.

102. MICROSCOPICAL EXAMINATION OF FIBERS, FOODS, AND DRUGS—(C) Sem. 1, 1+3, Cr. 2.

Calibration of the microscope, microscopic measurements, drawing microscopic objects to scale. Study of the physical and chemical characteristics of commercial fibers, such as linen, silk, wool, hemp, sisal, of foods and drugs, including starches, various crystals, tannins, gums, fats, oils, spices, powders, and their adulterants.

Prerequisite: Botany 101.
Laboratory fee $3.00; *deposit* $2.00.

110. MORPHOLOGY OF THE ALGAE—(C). Sem. 2, 2+4, Cr. 3.

A study of all groups of the algae with particular emphasis upon structure, reproduction, and economic importance.

Prerequisite: Botany 1.
Omitted 1928-29.
Laboratory fee $3.00; *deposit* $2.00.

111. MORPHOLOGY OF THE FUNGI.—(C) Sem. 2, 2+4, Cr. 3.
A study of all groups of the fungi with particular emphasis upon structure and life history.
Prerequisite: Botany 1.
Laboratory fee $3.00; *deposit* $2.00.

114. MORPHOLOGY OF THE BRYOPHYTES.—(C) Sem. 1, 2+4, Cr. 3.
This course deals with the habitat, structure, and life history of the liverworts and mosses.
Prerequisite: Botany 1.
Laboratory fee $3.00; *deposit* $2.00.

115. MORPHOLOGY OF THE PTERIDOPHYTES.—(C) Sem. 2, 2+4, Cr. 3.
A study of ferns and fern allies, their structure and life history.
Prerequisite: Botany 1.
Laboratory fee $3.00; *deposit* $2.00.

118. MORPHOLOGY OF GYMNOSPERMS.—(C) Sem. 1, 2+4, Cr. 3.
This course consists chiefly of a study of the development of the gametophytes and young sporophytes.
Prerequisite: Botany 1.
Laboratory fee $3.00; *deposit* $2.00.

119. MORPHOLOGY OF ANGIOSPERMS.—(C) Sem. 2, 2+4, Cr. 3.
A general survey of seed plants, including details of development and microscopic structure of leaf, stem, and root. Particular attention is given to the development of the flower and fruit.
Prerequisite: Botany 1.
Laboratory fee $3.00; *deposit* $2.00.

125. BACTERIOLOGY.—(C) Sem. 1, 2+6, Cr. 4.
A course in general bacteriology and the general biology of microorganisms, including yeasts and molds. Preparation of culture media, methods of isolation and identification, sterilization, inoculation, infection, immunity, toxins, and other fundamentals of the subject.
Prerequsite: Botany 1, or Zoology 51; Chemistry 51.
Laboratory fee $4.00; *deposit* $2.00.

131. PLANT PHYSIOLOGY.—(C) Sem. 2, 2+6, Cr. 4.
Fundamental physiology of the cell, protoplasmic membranes, osmotic phenomena and metabolism, with special reference to seed plants.
Prerequisite: Botany 101, and Chemistry 51.
Laboratory fee $4.00; *deposit* $2.00.

142. LOCAL FLORA.—(C) Sem. 1 or 2, 1+6, Cr. 3.
Assignments covering particular areas or a particular group or groups of plants. Written reports on assigned subjects are required at regular intervals.
Prerequisite: Botany 2.
Laboratory fee $3.00; *deposit* $2.00.

161. FACTS AND THEORIES OF HEREDITY.—(C) Sem. 2, 2+0, Cr. 2.

A lecture course covering a wide range of literature. Written reports on assigned subjects are required at regular intervals.

Prerequisite: Botany 1 and 2, or Botany 1 and at least one course selected from Botany 110 to 119.

162. GENETICS.—(C) Sem. 2, 2+4, Cr. 3.

The fundamental principles of heredity and variation; the physical basis of heredity, cytoplasmic inheritance, Mendelian interpretations of the facts of inheritance, pure lines, inbreeding and cross-breading, mutation, factor linkage, the determination of sex, quantitative inheritance, with suggestions regarding plant and animal improvement. Laboratory studies on hybrid plant materials, and simple breeding experiments on the fruit fly.

Prerequisite: Botany 2, and Zoology 51.
Laboratory fee $3.00; *deposit* $2.00.

171. BOTANICAL MICROTECHNIQUE.—(D) Sem. 1, 1+9, Cr. 4.

Principles and methods of killing, fixing, embedding, sectioning, staining, mounting, drawing, etc. Most attention is given to the paraffin process.

Prerequisites: Botany 101 and 119, and Chemistry 51.
Laboratory fee $5.00; *deposit* $2.00.

172. Cytology.—(D) Sem. 2, 2+6, Cr. 4.

A study of the cell, its organs and various cell contents; nuclear and cell division and differentiation of the cell, including theories and cell phenomena in respect to the origin of parts and in relation to genetics.

Prerequisite: Botany 171.
Laboratory fee $4.00; *deposit* $2.00.

THE DEPARTMENT OF BUSINESS MANAGEMENT

This department is intended to aid students in preparing for responsible business and executive positions.

To students in other departments it offers opportunities to become thoroughly acquainted with general business principles and practices.

THE CURRICULUM IN BUSINESS MANAGEMENT

The courses for the freshman year are the same as those prescribed for all students in the College of Liberal Arts.

Sophomore Year

First Semester	Cr.	*Second Semester*	Cr.
B.M. 55 Elementary Accounting	2	B.M. 56 Elementary Accounting	2
Eco. 51 Principles of Economics	3	Eco. 52 Principles of Economics	3
Science	4—5	Science	4—5
Sophomore Constant	6	Sophomore Constant	6
	15 or 16		15 or 16

Junior Year

First Semester	Cr.	*Second Semester*	Cr.
B.M. 105 Managerial Uses of Records	3	B.M. 106 Business Finance	3
B.M. 121 Marketing Principles	3	B.M. 122 Sales Administration (or B.M. 172 Principles of Advertising)	3
B.M. 131 Business Law (or B.M. 151 Business Management Problems)	3	B.M. 132 Business Law (or B.M. 152, Business Management Problems).	3
Eco. 101 Economic History of the U. S. (or Eco. 142 Labor Problems)	3	Eco. 151 Money & Banking (or Eco. 162 Investments)	3
Elective	4	Geol. 5 Economic Geography	3
	16		15

Senior Year

First Semester	Cr.	*Second Semester*	Cr.
B.M. 151 Business Management Problems (or B.M. 131 Business Law)	3	B.M. 152 Business Management Problems (or B.M. 132 Business Law)	3
B.M. 155 Advanced Accounting	5	B.M. 156 Advanced Accounting	5
Eco. 142 Labor Problems (or Eco. 101 Economic History	3	B.M. 172 Principles of Advertising (or B.M. 122 Sales Administration)	3
Elective	5	Eco. 162 Investments (or Eco. 151 Money and Banking)	3
	16	Elective	2
			16

THE CURRICULUM FOR COMMERCIAL TEACHERS IN SECONDARY SCHOOLS

The work of the first years is the same as that which is prescribed for the Business Management Curriculum.

Junior Year

First Semester	Cr.	*Second Semester*	Cr.
B.M. 105 Managerial Uses of Records	3	B.M. 106 Business Finance	3
B.M. 121 Marketing Principles	3	B.M. 122 Sales Administration	3
Psych. 51 General Psychology	3	Psych. 52 Educational Psychology	3
Ed. 113 General History of Education	3	Geol. 5 Economic Geography	3
Eco. 101 Economic History of the U. S.	3	Ed. 119 Secondary Education	3
B.M. 01 Beginning Typewriting	0	B.M. 02 Advanced Typewriting	0
	15		15

Senior Year

First Semester	Cr.	*Second Semester*	Cr.
Ed. 151 Principles of Teaching	3	Ed. 191 Supervised Teaching	3
B.M. 131 Business Law	3	B.M. 132 Business Law	3
B.M. 151 Business Management Problems	3	B.M. 152 Business Management Problems	3
B.M. 199 Teaching of Commercial Subjects	3	Eco. 151 Money and Banking	3
B.M. 03 Beginning Stenography	0	B.M. 04 Advanced Stenography and Office Practice	0
Elective	3	Elective	3
	15		15

THE SECRETARIAL TRAINING CURRICULUM

The work of the first two years is the same as that which is prescribed for the Business Management Curriculum.

Junior Year

First Semester	Cr.	*Second Semester*	Cr.
Foreign Language	3	Foreign Language	3
Eng. 61 Exposition	2	Eng. 62 Narration	2
Psych. 51 General Psychology	3	Eco. 151 Money and Banking	3
P.S. 51 Introduction to Political Science	2	B.M. 106 Business Finance	3
B.M. 01 Beginning Typewriting		B.M. 02 Advanced Typewriting	0
Elective	3	Elective	4 or 5
	15 or 16		15 or 16

Senior Year

First Semester	Cr.	*Second Semester*	Cr.
B.M. 121 Marketing Principles	3	B.M. 132 Business Law	3
B.M. 131 Business Law	3	B.M. 152 Business Management Problems	3
B.M. 151 Business Management Problems	3	B.M. 172 Principles of Advertising	3
Eng. 103 Argumentation	3	Eco. 162 Investments	3
B.M. 03 Beginning Stenography	0	B.M. 04 Advanced Stenography	0
Elective	3	Elective	3
	15		15

THE BUSINESS-LAW CURRICULUM (FOUR YEARS)

This course covers four years and leads to the degree of Bachelor of Arts. The work of the three first years is approximately the same as that which is prescribed for the Business Management Curriculum.

*During the fourth year a major of at least 24 credits is to be completed in Law, in such suggested subjects as Agency, Bailments and Carriers, Bills and Notes, Constitutional Law, Contracts, Corporations, Partnership, Persons and Domestic Relations, and Sales.

THE BUSINESS-LAW CURRICULUM (SIX YEARS)

This course, covering a period of six school years, leads to the degree of Bachelor of Arts at the end of the fourth year and to the degree of Bachelor of Laws at the end of the sixth year.

First and Second Years

The work of the first two years is the same as that which is prescribed for the Business Management Curriculum.

Third Year

First Semester	Cr.	*Second Semester*	Cr.
B.M. 105 Managerial Uses of Records	3	B.M. 106 Business Finance	3
B.M. 121 Marketing Principles	3	B.M. 132 Business Law	3
B.M. 131 Business Law	3	B.M. 152 Business Management Problems	3
B.M. 151 Business Management Problems	3	B.M. 172 Principles of Advertising	3
Eco. 142 Labor Problems	3	Eco. 151 Money and Banking	3
	15		15

Fourth, Fifth, and Sixth Years

The regular law course as outlined in the School of Law.

COURSES IN BUSINESS MANAGEMENT

55. ELEMENTARY ACCOUNTING. (B) Sem. 1. 2+2, cr. 2.
Account construction; books of original entry; recording, classifying, and interpreting the financial data of partnerships and corporations. Two recitations and a two-hour laboratory period each week.

56. ELEMENTARY ACCOUNTING. (B) Sem. 2, cr. 2.
Continuation of Business Management 55.
Prerequisite: Business Management 55 or its equivalent.

101. SURVEY OF BUSINESS ACTIVITIES. (C) Sem. 1, cr. 3.
This course undertakes a rapid survey of the development of industrial society and its modern problems; a study of the economic relations of interdependent groups; a description of the organization and activities of modern business serving economic society. Not open to students majoring in Business Management.

105. MANAGERIAL USES OF RECORDS. (C) Sem. 1, cr. 3.
A discussion of the manager's problems of control, and the evaluation of the mechanisms for effecting control.
Prerequisite: Business Management 56.

106. BUSINESS FINANCE. (C) Sem. 2, cr. 3.

Topics discussed are: capitalization; kinds of securities; financial policy; management of income; taxes; duties of officers and directors; interpretation of financial statements; consolidations; mergers; holding companies; receivership; reorganization.

Prerequisite: Business Management 56 and Economics 52.

121. MARKETING PRINCIPLES. (C) Sem. 1, cr. 3.

An analysis of marketing problems and methods: middlemen and their functions, produce exchanges, cooperative marketing, the market price, price-maintenance and unfair competition, the cost of marketing.

Prerequisite: Economics 52.

122. SALES ADMINISTRATION. (C) Sem. 2, cr. 3.

An analysis of personal selling processes from the standpoint of management. Among the topics discussed are: planning for personal selling, psychological aspects of buying and selling, the sales interview, sales methods, supervision and control of salesmen.

Prerequisite: Economics 52.

125. SECRETARIAL ACCOUNTING. (C) Sem. 2, cr. 2.

A brief course covering the accounting records and business forms used by clubs and societies. Particular emphasis is placed on business records as a means of control for educational, charitable, and religious organizations.

Prerequisite: Business Management 56.

131. BUSINESS LAW. (C) Sem. 1, cr. 3.

A comprehensive course in the legal aspects of business, treating of the business man's relations to his market, labor, administration of finances, risks, and the form of the business unit. The material is presented by the case method.

Prerequisite: Junior standing.

132. BUSINESS LAW. (C) Sem. 2, cr. 3.

Continuation of Business Management 131.

Prerequisite: Business Management 131.

151. BUSINESS MANAGEMENT PROBLEMS. (D) Sem. 1, cr. 3.

A study of the problems dealing with the management of personnel, risk-bearing, correspondence, and office. Credit is withheld until Business Management 152 is successfully completed.

Prerequisite: Economics 52.

152. BUSINESS MANAGEMENT PROBLEMS. (D) Sem. 2, cr. 3.

Continuation of Business Management 151.

Prerequisite: Business Management 151.

155. ADVANCED ACCOUNTING. (D) Sem. 1, cr. 5.

An intensive study of special cases and problems in accounting, including application of funds statements, statements of affairs, liquidations, estates, instalment sales, consignments, branch houses, foreign exchange, insurance, consolidations, and holding companies.

Prerequisite: Business Management 105.

156. ADVANCED ACCOUNTING. (D) Sem. 2, cr. 5.
Continuation of Business Management 155.
Prerequisite: Business Management 155.

172. PRINCIPLES OF ADVERTISING. (D) Sem. 2, cr. 3.
A basic course in the theory, principles, and applications of advertising. It includes (1) the history and development of advertising, (2) factors which determine the kind and extent of advertising, (3) the technique of advertising.
Prerequisite: Business Management 121.

199. TEACHING OF COMMERCIAL SUBJECTS. (D) Sem. 1, cr. 3.
Materials and methods in the teaching of commercial subjects.
Prerequisite: Senior standing.

01. BEGINNING TYPEWRITING. Each sem., 10 hrs., cr. 0.
This course is open to any student in the University who wishes to acquire the skill to operate the typewriter by touch.
Typewriting fee $4.50.

02. ADVANCED TYPEWRITING. Each sem., 10 hrs., cr. 0.
Continuation of course 01.
Typewriting fee $4.50.

03. BEGINNING STENOGRAPHY. Each sem., 5 hrs., cr. 0.
A study of the principles of Gregg Shorthand.

04. ADVANCED STENOGRAPHY AND OFFICE PRACTICE. Each sem. 5 hrs., cr. 0.
This is an advanced course in shorthand which places special emphasis on phrasing, transcribing, correct business English, and on the duties of a private secretary. Office management and technique form an important part of the course.

THE DEPARTMENT OF CHEMISTRY

The work of this department is arranged to meet the needs of students who are preparing to major in chemistry or to become pharmaceutical chemists, pharmacists, physicians, dentists, and chemical engineers, to prepare students to be teachers of chemistry in high schools and colleges, and to supply the wants of students in the College of Liberal Arts who wish to acquire a knowledge of general chemistry.

Students who choose chemistry as their major subject may begin the study in their sophomore year and continue until the prescribed courses in chemistry are completed. Collateral work may be chosen from among the courses in bio-chemistry, advanced organic and inorganic chemistry.

The Major, 24 credits will ordinarily take the following courses: 62, 106, 107, 101, 181, 140, at the discretion of the department, including Chemistry 51 and 53.

The Minor, 18 credits, must include Chemistry 51, 53 and 62. The following additional courses are suggested: Chemistry 108 or Chemistry 104. Students taking a second minor in Chemistry take 15 units, which must include Chemistry 61.

COURSES IN CHEMISTRY

51. GENERAL CHEMISTRY. (B) Sem. 1. 3+3, cr. 4.
Fundamental laws are taken up and the student thoroughly grounded by means of lectures and experiments. A few of the most common elements are described.
Laboratory fee $6.00; *deposit* $4.00.

53. INORGANIC CHEMISTRY. (B) Sem. 2. 3+3, cr. 4.
A continuation of Chemistry 51. The properties of the elements, both chemical and physical, are studied and their reactions with one another are noted in the light of the most modern atomic theory and ionic hypothesis.
Prerequisite: Chemistry 51.
Laboratory fee $6.00; *deposit* $4.00.

61. Qualitative Analysis. (B) Sem. 2. 0+6, cr. 2.
Separation and indentification of all important cations and anions are studied. This course is especially suited to the needs of those studying pharmacy and medicine.
To accompany Chemistry 53.
Laboratory fee $6.00; *deposit* $4.00.

62. QUALITATIVE ANALYSIS. (B) Sem. 2. 0+9, cr. 3.
Separation and identification of all important cations and anions, both wet and dry reactions. This course is preparatory to the courses in Quantitative Analysis.
Prerequisite: Chemistry 61.
Laboratory fee $6.00; *deposit* $4.00.

71. HOUSEHOLD CHEMISTRY. (B) Sem. 1. 2+6, cr. 4.
Chemistry and microscopy of textile fibres. Dyes and dyeing. Disinfectants. Soaps and washing powders. Bleaching and clothes washing. Adulterations of foods. Lotions and cosmetics.
Laboratory fee $6.00; *deposit* $4.00.

101. ORGANIC CHEMISTRY. (C) Sem. 1. 3+6, cr. 5.
A brief survey of the compounds of carbon, their preparation, properties, and applications is made. The course is especially designed for students in Pharmacy.
Prerequisite: Chemistry 53.
Laboratory fee $7.50; *deposit* $4.00.

102. ORGANIC CHEMISTRY. (C) Sem. 1. 3+ 9, cr. 6.
A brief survey of the compounds of carbon, their preparation, properties, and applications is made. The course is especially designed for pre-medical students.
Prerequisite: Chemistry 53.
Laboratory fee $7.50; *deposit* $4.00.

103. ORGANIC CHEMISTRY. (C) Sem. 1. 3+3, cr. 4.
A brief survey of the compounds of carbon, their properties, preparation, and applications is made. The course is designed to meet the needs of students in Home Economics.
Prerequisite: Chemistry 53.
Laboratory fee $7.50; *deposit* $4.00.

104. QUANTITATIVE ANALYSIS. (C) Sem. 1. 0+6, cr. 2.
This is a brief course in both gravimetric and volumetric methods designed to meet the needs of students in Pharmacy.
Prerequisite: Chemistry 61.
Laboratory fee $6.00; *deposit* $4.00.

105. ADVANCED THEORY AND PROBLEMS. (C) Sem. 2. 2+0, cr. 2.
Discussion of the most advanced theories in Chemistry is taken up. Proofs and practical applications are worked out by the student by means of problems.
Prerequisite: Chemistry 53.
Laboratory fee $6.00; *deposit* $4.00.

106. QUANTITATIVE ANALYSIS, GRAVIMETRIC. (C) Each sem. 1+9, cr. 4.
Use of the balance. Filtration, washing, and ignition of precipitates. A number of inorganic substances are selected for analysis with the object of giving the student practice in the various operations in gravimetric analysis.
Prerequisite: Chemistry 61.
Laboratory fee $6.00; *deposit* $4.00.

107. QUANTITATIVE ANALYSIS, VOLUMETRIC. (C) Each sem. 1+9, cr. 4.
Calibration of burettes and other measuring vessels. Acidmetry, alkalimetry, oxidation and reduction and precipitation methods of titration.
Prerequisite: Chemistry 61.
Laboratory fee $6.00; *deposit* $4.00.

108. HOUSEHOLD CHEMISTRY. (C) Sem. 2. 1+3, cr. 2.
Soaps and washing powers, bleaching and bleaching solutions, cleaning and dyeing of clothes. Cosmetics and lotions.
Prerequisite: Chemistry 53.
Laboratory fee $6.00; *deposit* $4.00.

110. ORGANIC PHARMACEUTICAL CHEMISTRY. (C) Sem. 1. 1+6, cr. 3.
This course includes a study of the preparation, identification, properties, uses, and doses of many compounds of complex nature that have not been taken up in Organic Chemistry 101. It also includes a study of the structure and the systhesis of typical alkaloids and their tests.
Laboratory fee $7.50; *deposit* $4.00.

140. BIO-CHEMISTRY. (C) Sem. 2. 3+3, cr. 4.
The chemistry of proteins, carbohydrates, and fats, and the changes these undergo during processes of digestion and metabolism. Brief consideration of enzymes and vitamines. Special emphasis is placed upon the application of colloid chemistry to problems in biochemistry.
Prerequisite Chemistry 101.
Laboratory fee $7.50; *deposit* $4.00.

151. INDUSTRIAL CHEMISTRY. (D) Sem. 1. 2+0, cr. 2.
Lectures on the large scale manufacture of the more important chemicals, such as sulfuric acid, ammonia, and the alkalies.

152. ADVANCED BIO-CHEMISTRY. (D) Sem. 1. 2+6, cr. 4.

Advanced consideration of the chemistry of plant and animal life. Largely a laboratory course, consisting of experiments with plant life, saps, pigments, glucosides, enzymes, and special biological preparations.

Prerequisite: Chemistry 140.

Laboratory fee $7.50; *deposit* $4.00.

153. INORGANIC PHARMACEUTICAL CHEMISTRY. (D) Sem. 1. 1+6, cr. 3.

The work embraces the study of the qualitative tests for impurities in pharmaceutical products, preparation of important pharmaceutical compounds, and the chemical assaying of certain pharmaceutical preparations.

Prerequisite: Chemistry 104.

Laboratory fee $6.00; *deposit* $4.00.

155. SYNTHETIC ORGANIC CHEMISTRY. (D) 2+9, cr. 5.

The preparation and properties of important organic compounds are taken up in this work. The purpose of the course is practical training in the manufacture of certain organic chemicals.

Prerequisite: Chemistry 101 and 104, or their equivalent.

Laboratory fee $6.00; *deposit* $4.00.

156. WATER ANALYSIS. (D) Sem. 1. 0+6, cr. 2.

Analysis of water from the sanitary and industrial standpoints.

Prerequisite: Chemistry 104, or an equivalent.

Laboratory fee $6.00; *deposit* $4.00.

106-161. FOOD AND DRUG ANALYSIS. (D) Yr. 1+6, cr. 3.

Designed to fit students for positions in food and drug laboratories. Qualitative and quantitative analysis of food and drug products commonly subjected to adulteration.

Laboratory fee $6.00; *deposit* $4.00.

175. ORGANIC ANALYSIS. (D) Sem. 1. 0+6, cr. 2.

Determinations of carbon, hydrogen, oxygen, and nitrogen in various organic substances.

Prerequisite: Chemistry 101 and 104.

Laboratory fee $6.00; *deposit* $4.00.

180. HISTORY OF CHEMISTRY. (D) Sem. 2. 1+0, cr. 1.

A survey of the history of chemical science from the earliest period to the present time. Lectures and collateral reading.

181. PHYSICAL CHEMISTRY. (D) Sem. 2. 3+3, cr. 4.

A course designed for Juniors and Seniors in Physics and Chemistry. Modern physics, chemical theories concerning thermodynamics, equilibria, chemical kinetics, electro-chemistry, and other topics are considered.

191. THE TEACHING OF CHEMISTRY. (D) Cr. 2.

This course is designed to meet the needs of students preparing to teach science in high schools. Methods of arousing interest in pupils are discussed and the preparations of experiments for the lecture table are elucidated.

(Given in alternate years.)

Prerequisite: Chemistry 101.

THE DEPARTMENT OF EDUCATION, PHILOSOPHY, AND PSYCHOLOGY

EDUCATION

Purpose—Work in Education is planned to meet the need of the following groups of students:

1. Candidates who wish to qualify for an A.B. degree and to teach in the elementary schools.
2. Candidates who wish to qualify for this degree and for a regular high school teacher's license.
3. Candidates desiring to qualify for this degree and for the first grade special high school teacher's license in art, commercial subjects, home economics, and industrial arts.
4. Candidates for the A.B. degree with a major in music who wish to qualify for the special high school teacher's license in music.
5. Those with a background of high school teacher training and a two-year teaching experience who desire the A.B. degree and a second grade elementary school principal's license or a similar high school principal's license.
6. Candidates for the A.B. degree with a major in another department of the College of Liberal Arts who select Education as a minor.

Requirements—All candidates, also those for a regular elementary school teacher's license, are to meet the following requirements:

1. The entrance requirements of the University.
2. The general requirements of the junior college curriculum.
3. The particular group requirements of the senior college curriculum, equivalent to the minimum amount of academic and professional work which may be necessary for one or the other of the various licenses.
4. The courses in Education required for the kind and grade of license desired.
5. Electives for the remaining hours needed to make a total of 124 semester hours of credit as required for graduation.

For the curriculum in Public School Music and all other curricula, see under the respective departments.

Announcements—

1. Students looking forward to school administration should include in this work at least ten semester hours in economics, political science, and sociology.

Three hours work in administrative courses will be offered each semester, the course chosen being determined by the demand.

2. Careful attention should be given to the requirements of the various states for a definite professional objective. Each student, therefore, is required to have his particular curriculum as well as the sequence of courses in his case approved by his adviser in Education.

3. The University joins other schools who are taking the lead in establishing a four-year course in elementary education in order (1) that

the child may secure the best of guidance and (2) that the position of the elementary school teacher may become elevated to the rank of a profession.

4. The four-year course in elementary education leading toward the A. B. degree with a major in elementary education will be published in the bulletin for 1930. Meanwhile candidates for this degree may take the junior college work preparatory to the major in elementary education which will henceforth be given only in the junior and senior years in the Department of Education.

COURSES IN EDUCATION

111. INTRODUCTION TO THE STUDY OF EDUCATION.—(C) Sem. 1. Cr. 3.

Some of the topics treated are: The organization of public education; the place and importance of education in our national life; the problems of education as they relate to the pupil, the teacher, and the parent; the general nature of the learning and the teaching processes; the educational reorganizations now under way; the scope of the public school system; financing public education; and present-day problems of our educational work.

113. GENERAL HISTORY OF EDUCATION.—(C) Sem. 1. Cr. 3.

A substitute for practice exemption. Educational theory and practice, beginning with the Greek and Roman periods, with the chief emphasis on the eighteenth and nineteenth century forces which have resulted in the creation of our modern national school system.

114. HISTORY OF EDUCATION IN THE UNITED STATES.—(C) Sem. 2. Cr. 3.

A substitute for practice exemption. A study of the development of American Educational ideals and practices, with special reference to the origin and development of the characteristically American features of our present-day education.

119. SECONDARY EDUCATION.—(C) Sem. 2. Cr. 3.

A course dealing with the purposes of the American secondary school and the ways and means by which those purposes are accomplished. Some of the topics treated are: American and European secondary education; problems in reorganization; characteristics of adolescence; the technique of guidance; the curriculum in terms of educational aims and objectives; the purposes governing the various activities of the departments of the school.

122. EXTRACURRICULAR ACTIVITIES OF THE SECONDARY SCHOOL.—(C) Sem. 2. Cr. 2.

Topics to be considered are: Educational values obtainable from extracurricular activities; the development and administration of these activities; efficient methods for directing qualities of leadership, initiative, and co-operation; the technique of direction, to be worked out in detail for several types of activities, such as school assemblies, dramatics, and athletics.

132. THE JUNIOR HIGH SCHOOL.—(C) Sem. 2. Cr. 3.

Intended primarily for prospective teachers and principals of junior high schools. A study of the nature and functions of the junior high school; its aims; the present status of its development; its present curriculum; its courses of instruction; significant features of certain junior high schools.

151. PRINCIPLES OF TEACHING.—(D) Sem. 1. Cr. 3.

The course deals with the following general topics: the fundamental principles of teaching; a survey of important methods and types of teaching; problems of technique; class organization and management.

161. STATE SCHOOL ADMINISTRATION.—(D) Cr. 3.

The basic course for school administration. A study of the educational principles underlying the proper administration of school systems in states and counties; a comparative study of the school systems of the various states; such topics as federal and state policy, forms of control, scope of the school system maintained, revenue and apportionment, the state and the teacher, the state and the child, private and denominational education, and state oversight and control.

(Given upon sufficient demand.)

171. ELEMENTARY SCHOOL ADMINISTRATION.—(D) Cr. 3.

A study of the work of principals in the administration of elementary schools, including an analysis of the duties of the principal; types of organization; programs of recitation and study; grading and promotion; selection and professional development of teachers.

(Given upon sufficient demand.)

172. Elementary School Supervision.—(D) Cr. 3.

Some of the topics studied are: The need of supervision; the art and technique of school room supervision; the supervision of school room instruction in the different school subjects; and means for improving the teaching technique and for estimating the teaching efficiency.

(Given upon sufficient demand.)

173. HIGH SCHOOL ADMINISTRATION.—(D) Cr. 3.

Historical rise of the high school, its function, legal status, financial aspects, plant and equipment, staff, daily schedule, administration of credit, records and reports, discipline, social organizations, athletics, accrediting. Open only to seniors.

(Given upon sufficient demand.)

174. High School Supervision.—(D) Cr. 3.

This course consists of problems dealing with the need for supervision; the amount of time a principal or superintendent should give to supervisory activities; the duties of the supervisor; devices of supervision and the technique of supervisory work.

(Given upon sufficient demand.)

181. INDIANA SCHOOL LAW.—(D) Cr. 2.

A course covering the laws under which the school system of Indiana operates; with the emphasis on the legal knowledge that superintendents,

supervisors, and principals as intelligent administrators should possess. Consideration is also given to comparison of the Indiana Code with other state codes and ideal codes.

(Given upon sufficient demand.)

191. SUPERVISED TEACHING IN HIGH SCHOOL SUBJECTS—(D) Sem. 2. Cr. 3.

Open only to seniors. This course is designed for student-teachers in high school subjects. The observation and practice work is done in the high school under the direction of the critic teacher. At least 40 class periods of observation, 20 class periods of teaching and a weekly conference are required. At these conferences reports of school work and assigned readings are discussed. An average grade of 1.5 quality points should have been earned in each of the subjects in which the student desires to be licensed.

COURSES IN PHILOSOPHY

51-52. HISTORY OF PHILOSOPHY.—(B) Each semester. Cr. 3.

A survey of philosophical thought from its rise among the ancient Greeks to the present time, with emphasis upon the great movements of thought rather than upon the details of philosophical systems. Certain systems, however, are selected for special study.

101. LOGIC.—(C) Sem. 1. Cr. 3.

An introductory course in the laws of thought. The evolution of the concept, its development into judgment and inference, the systematic function of classification, the explanatory function of generalization, and the methodology of proof and investigation are studied with a view to securing a foundation for an effective scientific method.

121. ETHICS.—(C) Sem. 2. Cr. 3.

The moral situation; problems and types of moral theory; conduct and character; happiness in its relation to conduct and social ends; the place of reason, duty, and self in the moral life; the virtues; social organization and the individual; civil society and the political state; the ethics of economic life; the family.

171. PHILOSOPHY OF EDUCATION.—(D) Cr. 3.

Only for matured students.

A course in present day principles and practices of educational theory. The course embraces readings, student group discussions, and class room discussions. Some of the problems to be considered are: Philosophy of life; concepts of experience and socialization; democracy and education; private vs. public education; the curriculum; principles of method; moral education; etc.

(Omitted 1928-29).

181. PRESENT-DAY PHILOSOPHY.—(D) Cr. 3.

A concrete study of two or three great systems of thought that have shaped the course of modern life, such as expressed by Kant, Hegel, Green, Bradley, Spencer, Royce, James, Dewey, Bergson, Russell, Watson, and others.

(Omitted 1928-29).

COURSES IN PSYCHOLOGY

51. GENERAL PSYCHOLOGY.—(B) Sem. 1. Cr. 3.

This course gives the student a general knowledge of the more important principles governing consciousness and behavior. The principal topics covered are instinct, habit, sensation, attention, association, perception, memory, imagination, reasoning, feeling, emotion, and will.

52. EDUCATIONAL PSYCHOLOGY.—(B) Sem. 2. Cr. 3.

A study of man's native equipment, the laws of learning, methods and economy in learning. Special consideration is given to the study of native capacities, emotions, and the dynamic role of instincts in school work.

101. CHILD PSYCHOLOGY.—(C) Sem. 1. Cr. 3.

A general course in child study, devoted chiefly to the normal child. Much time is given to the discussion of the inborn tendencies, capacities, likes and dislikes, child reasoning, and general behavior of children up to the age of twelve and thirteen. Physical and mental difficulties leading to abnormal states are pointed out.

116. ADOLESCENT PSYCHOLOGY.—(C) Sem. 2. Cr. 3.

A careful study of the problems of growth, reaction, mentality, and personality in adolescence, together with some account of the applied aspects as exemplified in typical junior and senior high schools.

118. TESTS AND MEASUREMENTS FOR ELEMENTARY SCHOOLS.—(C) Sem. 1. Cr. 3.

An introductory course in tests. The course will cover the uses of mental and subject-matter tests including those that can be made by the class room teacher. Such topics as the selection of tests, giving and scoring tests, and application of results to individual problems will be treated.

Fee for materials, $2.00.

121. TESTS AND MEASUREMENTS FOR SECONDARY SCHOOLS.—(C) Sem. 2. Cr. 3.

The practical use of standardized intelligence and educational tests in the secondary field. Methods of administration, technique of scoring, and interpretation of results.

Fee for materials, $2.00.

PHYSICAL EDUCATION

Physical Education is required of all freshmen and sophomores.

Men

01-02. FRESHMAN COURSE—(A) Yr. Each semester. Cr. 0.

Instruction and intensive practice in marching, calisthenics, games, and sports. Outdoor work whenever possible.

03-04. SOPHOMORE COURSE.—(B) Yr. Each semester. Cr. 0.

The work in this course is a continuation along advanced lines of the work as outlined in the freshman course.

Women

01-02. FRESHMAN COURSE.—(A) Yr. Each semester. Cr. 0.

Instruction and intensive practice in marching, calisthenics, games, and sports. Outdoor work whenever possible.

03-04. SOPHOMORE COURSE.—(B) Yr. Each semester. Cr. 1.
Continuation of activities conducted during the freshman year.

1-2. PERSONAL HYGIENE.—(A) Yr. Each semester. Cr. 1.
This course will deal with fundamentals in personal and public hygiene, anatomy, and physiology. The aim of the course is to create scientific attitudes toward individual, family, and school health, stressing the application of hygiene by constructive and defensive habits.

THE DEPARTMENT OF ENGINEERING

GENERAL STATEMENT

Engineering is sometimes spoken of as "economic construction." This definition might have been satisfactory a hundred years ago, when engineering consisted almost entirely of construction in the narrowest sense of the term. At present, however, engineering has reached such a degree of development as to render the definition "economic construction" wholly inadequate.

A more satisfactory definition of engineering is, "the art and science of economically directing the great sources of power in nature for the use and convenience of man." This definition touches fundamentals, and accordingly has not been improved upon within the last half century.

For the benefit of the prospective student it may be said that to direct these sources of power in nature means, for example,

(a) to harness the Falls of Niagara, by converting water-power into electrical energy for power, light, heat, etc.

(b) to manufacture iron, steel, and other metals from ore brought out of the earth, and to work these metals up into tools, machines, bridges, buildings, transportation equipment, etc.

(c) to manufacture cement from nature's raw materials (limestone, clay, etc.) containing the necessary chemical elements, and in turn to use the cement for concrete in the construction of roads, bridges, buildings, dams, walls, foundations, aqueducts, etc.

(d) to mine coal and to burn it for the production of heat and steam for transportation and for the machinery of industry.

A century ago engineering comprised only two divisions, military and civil engineering. Now, however, there are three outstanding divisions; civil, mechanical, and electrical engineering. In each of these major lines Valparaiso University proposes to give a standard four-year college course with the degree of Bachelor of Science in engineering.

The instruction is designed to ground the student thoroughly in the basic principles of engineering science, and to offer sufficient application to engineering problems to enable him to be of substantial service to his employer immediately upon graduation. Work in the library, the drafting room, the laboratory, the field, and the classroom is so correlated as to give the student the particular training that is recommended by the leading engineers of our day.

ADVANTAGES

One advantage for engineering students at Valparaiso is the location of the University in a quiet, clean, and healthful residence city, which offers every advantage for the work of the student in the real sense of the term.

The University enjoys also a most desirable general location for engineering students. Being only 44 miles from Chicago, the world's greatest railroad center and the engineering center of the United States, Valparaiso students are within reach of engineering works of the first magnitude. Abundant opportunities exist for official inspection trips to these works both while they are in process of construction and when they are completed.

Furthermore, the ratio of the number of instructors to the number of engineering students at Valparaiso makes the classes relatively small. The student receives an amount of individual attention that is not possible where the classes are large. Many students, especially in engineering, have become hopelessly discouraged because their classes were too large.

Again, engineering students at Valparaiso need not confine their work wholly to engineering. Excellent opportunity is afforded in the several departments of the University for collateral scientific work and for a wide range of liberal cultural studies.

For the present the Department of Engineering limits enrollment to 150 students properly distributed; but the smaller institutions are receiving each year an increasing number of engineering students for their full four-year curriculum. Many of these students, however, after two or three years' work, transfer to the larger schools. This practice has some features to recommend it. At the usual age of entering college the average young man has somewhat better prospects for success, by doing at least his first college work in a school of medium size where worthy acquaintanceships are readily made and where the classes are sufficiently small to permit the elimination of the impersonal feature that is characteristic of large classroom work.

The service being rendered by Valparaiso makes its strongest appeal to the young man of modest circumstances, but of high ideals, who stands ready to deny himself some pleasures and distractions, for the time being, for a college education that will thoroughly equip him as well for his general duties as for his professional success as an engineer.

OPPORTUNITIES FOR GRADUATES

Graduates in civil, mechanical or electrical engineering are afforded a wide variety of opportunities for employment immediately upon graduation and throughout their career. Each year a rather fixed number find their way into the fields of technical journalism and of education as teachers of engineering and other subjects in the colleges and universities. An increasing number enter the public service as employees of cities, counties, the states, and the federal government. Again, after some experience at

actual engineering work, a fair percentage enter private practice as consulting engineers in their respective branches.

The respective fields of employment open to graduates in civil, mechanical, and electrical engineering are indicated as follows:

CIVIL ENGINEERING graduates at once engage upon work that qualifies them as surveyors, topographical engineers, drainage and irrigation engineers, sanitary engineers, highway engineers, railway engineers, bridge engineers, structural engineers, materials testing engineers, research engineers, contractors and builders, etc. Many enter the service of the Government, as in the geological survey, the coast and geodetic survey, the reclamation service, the structural work of the Supervising Architect's Office, the highway work of the Bureau of Public Roads, etc.

MECHANICAL ENGINEERING graduates find employment throughout a wide range of industrial and public service enterprises and in many branches of the Government. One of the most important divisions in the industrial field is the "engineering department," where new designs are planned and developed for the industry. Within this department are the fields of testing, experimenting, and of scientific research. Another division is that of "manufacturing," where the paramount problem is the attainment of maximum production at minimum cost. Still other divisions are those of maintenance, improvement work, and inspection service.

During recent years a fertile field has developed in sales engineering work, where the merits of a product can best be presented by the man technically trained along the particular line. Many engineers also advance to work of an administrative or executive character, usually along the general line of mechanical engineering.

ELECTRICAL ENGINEERING graduates have to do with equipment used for the generation, transmission, and utilization of electrical energy. The field of employment has become very large within the last few years and is increasing faster than that of other lines of engineering. College trained men are engaged for the design, manufacture, operation, and testing of this equipment, and readily adapt themselves to the various applications in these fields.

According to the respective purposes of the miscellaneous lines of electrical equipment, the engineer may choose to enter the field of communication, having to do with the telephone, telegraph, radio, etc.; or the field of transportation, dealing with the traction of common carriers by electricity; or the broad fields of research, power, public utilities, manufacture, construction, etc.

Employment in sales engineering work is open also to electrical engineering graduates. The higher executive positions, too, are frequently filled by electrical engineering graduates who become specially qualified for such positions by experience.

THE ENGINEERING CURRICULA

The Freshman Year for All Curricula in Engineering Is Identical

Freshman Year

	First Semester	Class	Lab.	Cr.
Math. 60.	College Algebra	2	0	2
Math. 51.	Trigonometry	3	0	3
Engl. 1.	Language and Composition	3	0	3
Chem. 51.	General Chemistry	3	3	4
Pract. Mech. 1.	Engineering Drawing	0	6	2
Pract. Mech. 10.	Woodshop, 12. Pattern Making, 58. Machine Shop, or 61. Foundry	0	6	2
				16

(P.M. 10 & 12 required of civils and electricals, 10 first semester.)
(P.M. 10, 12, 58 & 61 required of mechanicals, 10 & 58 first semester.)

	Second Semester			
Math. 70.	Analytical Geometry	5	0	5
Engl. 2.	Language and Composition	3	0	3
Chem. 53.	Inorganic Chemistry	3	3	4
P. M. 2.	Engineering Drawing	0	6	2
P. M. 4.	Engineering Problems	0	3	1
P. M. 10.	Woodshop, 12. Pattern Making, 58. Machine Shop, or 61, Foundry	0	6	2
				17

THE CURRICULUM IN CIVIL ENGINEERING

Sophomore Year

	First Semester	Class	Lab.	Cr.
Math. 80.	Differential Calculus	5	0	5
Phys. 61.	Technical Physics	3	3	4
C. E. 51.	Surveying	2	6	4
Geol. 10.	Engineering Geology	3	3	4
				17

	Second Semester			
Math. 120.	Integral Calculus	5	0	5
Phys. 62.	Technical Physics	3	3	4
P. M. 51.	Descriptive Geometry	1	3	2
C. E. 60.	Applied Mechanics	5	0	5
				16

Junior Year

	First Semester	Class	Lab.	Cr.
C. E. 101.	Surveying	2	9	5
C. E. 107.	Curves and Earthwork	3	3	4
C. E. 120.	Graphics	1	6	3
C. E. 130.	Mechanics of Materials	5	0	5
				17

	Second Semester	Class	Lab.	Cr.
C. E. 109.	Railroads	2	6	4
C. E. 115.	Stresses	5	0	5
C. E. 125.	Roads and Pavements	3	3	4
C. E. 135.	Hydraulics	3	0	3
	Elective	2	0	2
				18

Senior Year

First Semester

C. E. 151.	Masonry and Foundations	2	0	2
C. E. 155.	Bridge Design	1	12	5
C. E. 163.	Reinforced Concrete	3	3	4
C. E. 169.	Water Supply	3	0	3
M. E. 175.	Heating and Ventilating	2	0	2
	Elective	2	0	2
				18

Second Semester

C. E. 159.	Structural Design	0	6	2
C. E. 164.	Reinforced Concrete	3	3	4
C. E. 173.	Sewerage	3	0	3
C. E. 181.	Materials Testing	0	6	2
*C. E. 177.	Engineering Economics	2	0	2
C. E. 185.	Contracts and Specifications	2	0	2
M.E. 125.	Materials of Engineering	2	0	2
	Elective	2	0	2
				19

THE CURRICULUM IN MECHANICAL ENGINEERING

Sophomore Year

First Semester

Math. 80.	Differential Calculus	5	0	5
Phys. 61.	Technical Physics	3	3	4
C. E. 51.	Surveying	2	6	4
M. E. 51.	Mechanisms	2	3	3
P. M. 58.	Machine Shop	0	6	2
				18

Second Semester

Math. 120.	Integral Calculus	5	0	5
Phys. 61.	Technical Physics	3	3	4
P. M. 51.	Descriptive Geometry	1	3	2
P. M. 60.	Machine Shop and Forge	0	6	2
C. E. 60.	Applied Mechanics	5	0	5
				18

*Approved electives may be substituted for courses marked by an asterisk.

Junior Year

First Semester

		Class	Lab.	Cr.
C. E. 130.	Mechanics of Materials	5	0	5
Phys. 111.	Theory of Heat Laboratory	0	3	1
M. E. 101.	Thermodynamics	3	0	3
M. E. 111.	Mechanical Laboratory	0	3	1
M. E. 118.	Machine Design	2	9	5
E. E. 107.	Electrical Machinery	3	3	4
				19

Second Semester

M. E. 106.	Heat Engines	5	0	5
M. E. 112.	Mechanical Laboratory	0	6	2
M. E. 119.	Machine Design	2	9	5
M. E. 125.	Materials of Engineering	2	0	2
E. E. 108.	Electrical Machinery	3	3	4
				18

Senior Year

(The Department will begin to offer Senior work in September, 1929)

First Semester

M. E. 151.	Mechanical Laboratory	0	6	2
M. E. 157.	Heat and Power Engineering	3	0	3
M. E. 161.	Factory Management	2	0	2
M. E. 163.	Drawing and Design	0	9	3
M. E. 169.	Manufacturing Methods	2	0	2
M.E. 175.	Heating and Ventilating	2	0	2
B. M. 101.	Survey of Business Activities	3	0	3
				17

Second Semester

M. E. 152.	Mechanical Laboratory	0	6	2
M. E. 158.	Heat and Power Engineering	3	0	3
M. E. 164.	Drawing and Design	0	9	3
C. E. 135.	Hydraulics	3	0	3
C. E. 167.	Cost Finding	2	0	2
C. E. 177.	Engineering Economics	2	0	2
C. E. 185.	Contracts and Specifications	2	0	2
				17

THE CURRICULUM IN ELECTRICAL ENGINEERING

Sophomore Year

First Semester

Math. 80.	Differential Calculus	5	0	5
Phys. 61.	Technical Physics	3	3	4
C. E. 51.	Surveying	2	6	4
M. E. 51.	Mechanisms	2	3	3
B. M. 101.	Survey of Business Activities	3	0	3
				19

Second Semester

Math. 120.	Integral Calculus	5 + 0	5
Phys. 62.	Technical Physics	3 + 3	4
E. E. 51.	Elements of Electricity	3 + 2	4
P. M. 51.	Descriptive Geometry	1 + 3	2
P. M. 52.	Electrical Drawing	0 + 6	2
			17

Junior Year

First Semester

Phys. 125.	Electrical Measurements	1 + 6	3
C. E. 130.	Mechanics of Materials	5 + 0	5
M. E. 101.	Thermodynamics	3 + 0	3
E. E. 111.	D. C. Machinery	3 + 0	3
E. E. 112.	D. C. Laboratory	0 + 4	2
	Elective		2
			18

Second Semester

C. E. 60.	Applied Mechanics	5 + 0	5
C. E. 135.	Hydraulics	3 + 0	3
E. E. 113.	D. C. Machinery	3 + 0	3
E. E. 114.	D. C. Laboratory	0 + 4	2
M. E. 106.	Heat Engines	5 + 0	5
			18

Senior Year

(The Department will begin to offer Senior work in September, 1929)

First Semester

E. E. 151.	A. C. Machinery	4 + 0	4
E. E. 152.	A. C. Laboratory	0 + 4	2
E. E. 165.	Elec. Machine Design	0 + 6	2
M. E. 111.	Mechanical Laboratory	0 + 3	1
M. E. 161.	Factory Management	2 + 0	2
Phys. 111.	Theory of Heat Laboratory	0 + 3	1
	Elective		5
			17

Second Semester

E. E. 153.	A. C. Machinery	4 + 0	4
E. E. 154.	A. C. Laboratory	0 + 4	2
E. E. 166.	Elec. Machine Design	0 + 6	2
M. E. 112.	Mechanical Laboratory	0 + 6	2
*C. E. 177.	Engineering Economics	2 + 0	2
*C. E. 185.	Contracts and Specifications	2 + 0	2
	Elective		2
			16

COURSES IN CIVIL ENGINEERING

51. SURVEYING—(B) Sem. 1. 2+6, cr. 4.

Field and drafting-room work with recitations, covering the fundamentals and practice of plane surveying, and including the theory, adjustment, care, and use of such surveying equipment, as the measuring tape, compass, level, transit, etc.

Practice in measuring lengths, areas, angles, etc.; systematic recording of field notes; making maps, plans, profiles, cross-sections, etc., from field notes; computations with use of logarithmc and other tables.

Prerequisite: Math. 51 and P. M. 2.

Laboratory fee $6.00; *deposit* $4.00.

60. APPLIED MECHANICS—(B) Sem. 2. 5+0, cr. 5.

Covering Statics and Kinetics. Composition and resolution of forces; principles of equilibrium of rigid bodies, commencing with the particle, with applications to machines, cranes, trusses, and other framed structures; centers of gravity and moments of inertia.

Force, mass, and acceleration; general equations of motion derived from Newton's laws; simple and compound pendulums; work, energy, impulse, momentum, impact, and friction. Practical applications of the principles are made to typical engineering problems.

Prerequisite: Math. 80 and 120, or Math. 120 concurrently with C. E. 60.

101. SURVEYING—(C) Sem. 1. 2+9, cr. 5.

Field and drafting-room work with recitations, including the theory and use of the plane table, stadia, sextant, and solar attachment to the transit, in triangulation, city surveying, topographic surveying, hydrographic surveying.

Also the application of astronomical theory to surveying in observations for determining latitude, azimuth, and time.

Prerequisite: C. E. 51.

Laboratory fee $6.00; *deposit* $4.00.

107. CURVES AND EARTHWORK—(C) Sem. 1. 3+3, cr. 4.

Recitations and field work in simple, compound, and transition curves as related to railways, highways, and canals. Survey and design of a transportation line, including reconnaissance, preliminary, and location work; estimates of quantities and costs; frog and switch work.

Prerequisite: C. E. 51.

Laboratory fee $2.00. *Deposit* $4.00.

109. RAILROADS—(C) Sem. 2. 2+6, cr. 4.

Principles and practice of railroad construction, maintenance, operation, and valuation: covering track, ballast, culverts, minor bridges, standard structures, tunnels, yards, terminals, etc. Also comparisons of materials for railroad use, preservative treatment of ties, and economics of railroad location as affected by balancing operating costs against grades and curvature.

Prerequisite: C. E. 107.

Laboratory fee $6.00; *deposit* $4.00.

115. STRESSES—(C) Sem. 2. 5+0, cr. 5.

The determination of reactions, moments, and shears in beams and simple trusses. Stresses in roof and bridge trusses under static and dynamic loads by the alegbraic method, with some attention to the graphical method.

Prerequisite: C. E. 60.

120. GRAPHICS—(C) Sem. 1. 1+6, cr. 3.

Graphical determination of stresses in roof and bridge trusses under action of static and moving loads; stresses in cranes and similar structures; also centers of gravity and moments of inertia by graphics.

Prerequisite: C. E. 60.

125. ROADS and PAVEMENTS—(C) Sem. 2. 3+3, cr. 4.

A study of the design, construction, and maintenance of various types of road and street wearing courses and foundations, covering plain and oiled earth, sand-clay, gravel, macadam, brick, concrete, granite block, asphalt block, wood block, and bituminous work. Particular attention is given to problems of drainage, grade, curves, width, etc. Following Government practice, complete surveys and plans are made for a specific highway improvement, and quantities and cost are estimated.

Prerequisite: C. E. 51.

Laboratory fee $2.00; *deposit* $4.00.

130. MECHANICS of MATERIALS—(C) Sem. 1. 5+0, cr. 5.

Principles of mechanics applied to structural members and engineering materials: covering physical properties of materials; theory of homogeneous and compound beams, including simple, cantilever, fixed, and continuous types; columns; resilience and work; impact and fatigue; rollers, plates and spheres; mathematical theory of elasticity; interpretation of results of actual tests of materials; study of shapes and other products given in the steel company's hand-books.

Prerequisite: C. E. 60.

135. HYDRAULICS—(C) Sem. 2. 3+0, cr. 3.

Lectures, recitations, and laboratory work on the laws of the motion of fluids; covering flow through orifices, open channels, and weirs. Also hydrostatic pressure on dams and gates; the theory of impulse wheels, turbines, and centrifugal pumps; the fundamentals underlying hydraulic development.

Prerequisite: Math. 120.

151. MASONRY and FOUNDATIONS—(D) Sem. 1. 2+0, cr. 2.

Materials for masonry, including stone, brick, terra cotta, tile, cement, lime, sand, etc., and the methods of using them.

Foundation design; covering subterranean explorations and unit loads; pneumatic caissons for bridges and buildings; the freezing process; timber, concrete, tubular and sheet piling; cofferdams; pier foundations in open wells; ordinary bridge piers; cylinders and pivot piers; bridge abutments; spread footings for building foundations.

155. BRIDGE DESIGN—(D) Sem. 1. 1+12, cr. 5.

The design of plate girder bridges and the complete design, with all computations and plans, of a railroad simple truss bridge. Computations

with stresses and sections of all members, pins, pin plates, splices, etc., and connecting rivets are arranged systematically. General detail plans show location of all rivets and make-up and relation of all members and connections. Final report gives full list of shapes, plates, etc., and a classified analysis of the estimated weight of the entire structure.

Prerequisite: C. E. 120 and 115.

159. STRUCTURAL DESIGN—(D) Sem. 2. 0+6, cr. 2.

Principles and practice in the design and detail of various types of ordinary structures of wood, steel, and their combination. Covers the detailing of plate girders, the design of structural members and connections, the design of wood trusses.

Prerequisite: C. E. 115.

163. REINFORCED CONCRETE—(D) Sem. 1. 3+3, cr. 4.

Materials for concrete, including cements, aggregates and water; the mixing, placing, and curing of concrete; properties of plain concrete; theory of reinforced concrete as applied to various structural members, as columns, beams, girders, slabs, etc.; T-beams and beams reinforced for compression; direct stress combined with flexure.

Prerequisite: C. E. 60 and C. E. 130.

164. REINFORCED CONCRETE—(D) Sem. 2. 3+3, cr. 4.

The design of retaining walls, dams, and girder bridges. Study of several types of floor, roof, and foundation construction for commercial buildings. The complete design, with working drawings and reinforcing schedules, of a reinforced concrete building, including stairway, elevator shafts, penthouses, etc.

Prerequisite: C. E. 163.

Deposit $4.00.

167. COST FINDING—(D) Sem. 2. 2+0, cr. 2.

Principles of valuation; methods of determining and recording costs of labor, material, and overhead in production.

Prerequisite: M. E. 161.

169. WATER SUPPLY—(D) Sem. 1. 3+0, cr. 3.

Sources and purity of water supplies and works for the distribution of water. Includes general hydrology, water resources of a basin, percolating waters, probable draft, flow into wells, data for designing conduits, typical structures, distributing reservoirs, network of street mains, fire protection, economics of pumped supplies, topographic maps of cities and drainage basins, and the design of a water supply system from given data.

173. SEWERAGE—(D) Sem. 2. 3+0, cr. 3.

The principles and practice in the design and construction of storm, sanitary, and combined systems of sewers; sewage treatment and disposal, with construction problems on the details of plants for the same; hydraulic problems, involving study of rain-fall, run-off, laws of flow, etc.; study of materials and methods of construction, specifications, and estimates of cost; the design of a small system for storm water and sanitary drainage, including house connections.

177. ENGINEERING ECONOMICS—(D) Sem. 2. 2+0, cr. 2.

A study of the fundamental principles of economics and their application to engineering structures and operations. Includes analyses of the problems of investment and first cost; interest on money; business units, as the sole proprietor, the partnership, the corporation; business statistics, as financial statements, cost keeping, comparisons; depreciation; theories of valuation; engineering reports.

181. MATERIALS TESTING—(D) Sem. 2. 0+6, cr. 2.

Study of theory, construction, and use of testing machines and the methods of commercial testing; determination of the properties of construction materials by mechanical tests, covering tensile, compressive, shearing, torsional, and flexure tests of metal and various tests of wood, all with stress-strain observations; tests of cement, concrete aggregate, plain and reinforced concrete.

The student learns to judge the properties of materials and to verify theoretical laws.

Prerequisite: M. E. 125 and C. E. 130.
Laboratory fee $4.00; *deposit* $4.00.

185. CONTRACTS AND SPECIFICATIONS—(D) Sem. 2. 2+0, cr. 2.

Legal, contractual, and personal engineering relations; development of contract principles; preparation of engineering contracts; general condition clauses, as extras, alterations, time limit, payment, etc.; interpretation of specifications; practice in writing specifications and reports; acquisition and conveyance of land; property rights defined by boundaries.

COURSES IN ELECTRICAL ENGINEERING

51. ELEMENTS OF ELECTRICITY—(B) Sem. 2. 3+2, cr. 4.

An introductory course in electricity and magnetism. Ohm's Law, Units, Instruments, Induction, Resistance, Capacity. The experimental work includes the manipulation of electrical apparatus and instruments, the study of safety methods and the practical application of the theory.

Prerequisite: Math. 51.
Laboratory fee $2.00; *deposit* $4.00.

107. ELECTRICAL MACHINERY—(C) Sem. 1. 3+3, cr. 4.

A general course in the study of electric machinery and power, direct current apparatus, generation, measurement and application of electric power. Experimental work on direct current circuits, including the use and calibration of instruments and the testing of direct current apparatus. Course is offered to non-electrical engineering students.

Prerequisite: Physics 62.
Laboratory fee, $4.00; *deposit* $4.00.

108. ELECTRICAL MACHINERY—(C) Sem. 2. 3+3, cr. 4.

A continuation of course 107, with special emphasis on alternating current apparatus and circuits.

Prerequisite: E. E. 107. Math. 120, required concurrently.
Laboratory fee $4.00; *deposit* $4.00.

111. DIRECT CURRENT MACHINERY—(C) Sem. 1. 3+0, cr. 3. (In 1929-30, cr. 4.)

A course for junior electrical engineers including the theory of dynamo electric machinery. Characteristic curves, parallel operation, operating characteristics, theory of commutation, rating, and efficiency.

Prerequisite: E. E. 51.

Deposit $4.00.

112. D. C. LABORATORY—(C) Sem. 1. 0+4, cr. 2.

A laboratory course to be taken with E. E. 111. The testing, operating characteristics, and rating of direct current apparatus.

Laboratory fee $6.00; *deposit* $4.00.

113. DIRECT CURRENT MACHINERY—(C) Sem. 2. 3+0, cr. 3. (In 1929-30, cr. 4).

A continuation of E. E. 111.

Prerequisite: E. E. 111.

114. D. C. LABORATORY—(C) Sem. 2. 0+4, cr. 2.

A continuation of E. E. 112.

Prerequisite: E. E. 111 and 112.

Laboratory fee $6.00; *deposit* $4.00.

151. ALTERNATING CURRENT MACHINERY—(D) Sem. 1. 4+0, cr. 4.

A course for senior electrical engineers including the study of alternating current circuits and machinery. The application of mathematics and graphics to alternating current circuits. Transient and high frequency phenomena. Hysteresis and eddy currents. Measurement of alternating current quantities. Transformers, induction motors, and synchronous machines.

152. A. C. LABORATORY—(D) Sem. 1. 0+4, cr. 2.

A laboratory course to be taken with E. E. 151. The testing of alternating current circuits and apparatus. Operating and efficiency tests of transformers and alternating current machinery.

Laboratory fee $6.00; *deposit* $4.00.

153. ALTERNATING CURRENT MACHINERY—(D) Sem. 2. 4+0, cr. 4.

A continuation of E. E. 151.

Prerequisite: E. E. 151.

154. A. C. LABORATORY—(D) Sem. 2. 0+4, cr. 2.

A continuation of E. E. 153.

Prerequisite: E. E. 152.

Laboratory fee $6.00; *deposit* $4.00.

165-166. ELECTRIC MACHINE DESIGN—(D) Yr. Each semester 0+6, cr. 2.

The design of direct current generators and motors, and of alternating current transformers, generators, and synchonous machines.

Prerequisite: E. E. 113.

COURSES IN MECHANICAL ENGINEERING

51. MECHANISMS—(B) Sem. 1. 2+3, cr. 3.

A study of the various elemental mechanisms used in machine construction; including instant centers, velocity and velocity diagrams, parallel and straight line motions, belt and pulley layouts, and the design of cams and gears.

Laboratory fee $6.00; *deposit* $4.00.

101. THERMODYNAMICS—(C) Sem. 1. 3+0, cr. 3.

The theory of gases with their behavior and laws. Special emphasis is placed on steam tables, the characteristics of steam and of other gases used for power purposes. A study is made of their practical applications.

Prerequisite: Math. 120.

106. HEAT ENGINES—(C) Sem. 2. 5+0, cr. 5.

Covers the various types of steam and internal combustion engines and the boiler and gas producers used for their power. The theory, operation, efficiency, and auxiliary equipment are considered and some direct observations are made.

Prerequisite: M. E. 101.

111. MECHANICAL LABORATORY—(C) Sem. 1. 0+6, cr. 2.

Elementary tests of mechanical equipment; including luricators, bearings, oils, friction tests, fuel tests, and the calibration of thermometers, gauges, indicators, and calorimeters.

Laboratory fee $6.00; *deposit* $4.00.

112. MECHANICAL LABORATORY—(C) Sem. 2. 0+6, cr. 2.

Tests of various engineering materials; including tension, compression, and other tests on specimens of concrete, wood, iron, steel, and the more common non-ferrous metals. The effect of heat upon metals is investigated and the S. A. E. Specifications are studied.

Laboratory fee $6.00; *deposit* $4.00.

118. MACHINE DESIGN—(C) Sem. 1. 2+9, cr. 5.

Consists of two hours recitation per week on the theory of design of machine parts, and nine hours drafting room practice in applying basic principles in the design of typical machines such as punches and pumps.

119. MACHINE DESIGN—(C) Sem. 2. 2+9, cr. 5.

This is a continuation of M. E. 118, and upon its completion embraces the theory, computations, details, and assembly drawings of the machines studied.

125. MATERIALS OF ENGINEERING—(C) Sem. 2. 2+0, cr. 2.

A study of the materials commonly used in engineering. Stress is laid on the metallurgy of the iron and steel family and the non-ferrous alloys. This course is given in conjunction with M. E. 112.

151. MECHANICAL LABORATORY—(D) Sem. 1. 0+6, cr. 2.

An experimental study of the simple slide valve steam engine, valve setting, pumps, blowers, flue gas analysis, dynamometers, gasoline engines, carburetors, and heating plants.

Laboratory fee $6.00; *deposit* $4.00.

152. MECHANICAL LABORATORY—(D) Sem. 2. 0+6, cr. 2.
Tests of boilers, condensers, feed-water heaters, plants for refrigeration, pumping, and power; turbines and steam, oil, and gas engines.
Laboratory fee $6.00; *deposit* $4.00.

157. HEAT POWER ENGINEERING—(D) Sem. 1. 3+0, cr. 3.
Covers the theory of design of the steam and gas engine. Consideration is given to the various types of engines and to the most modern practice in engine design.

158. HEAT POWER ENGINEERING—(D) Sem. 2. 3+0, cr. 3.
This is a continuation of M. E. 157 and covers a study of steam boiler design as well as work in gas producers, super and feed-water heaters.

161. FACTORY MANAGEMENT—(D) Sem. 1. 2+0, cr. 2.
Organization and lay-out; selection, placement, and wage payment of laborers; scientific management in production.
Prerequisite: Junior Standing.

163. DRAWING AND DESIGN—(D) Sem. 1. 0+9, cr. 3.
Given in conjunction with M. E. 157 and covers the complete design and detailing of either a steam or an internal combustion engine to satisfy given specifications.

164. DRAWING AND DESIGN—(D) Sem. 2. 0+9, cr. 3.
The completion of M. E. 163. When time permits it includes a preliminary layout of an associated problem.

169. MANUFACTURING METHODS—(D) Sem. 1. 2+0, cr. 2.
A study of typical methods used in the industries. Equipment, sequence of operations, and supervisory systems are covered. Definite plans are prepared showing a set-up for producing an assigned article, and official inspection trips are made to industries of various types.

175. HEATING AND VENTILATING—(D) Sem. 1. 2+0, cr. 2.
A study of methods of heating and ventilating residences, public buildings, and industrial plants. The ventilation of tunnels, shafts, and mines receives some attention. During the last few weeks a small heating and ventilating plant is designed.

COURSES IN PRACTICAL MECHANICS

1. ENGINEERING DRAWING—(A) Sem. 1. 0+6, cr. 2.
Lettering, care and use of instruments, principles of orthographic projection, common engineering geometry, working drawings, special sections, common fasteners, tracing and duplicating.

2. ENGINEERING DRAWING—(A) Sem. 2. 0+6, cr. 2.
Shop sketching, pictorial representation including isometric, cabinet and perspective drawing, platting graphs, topographical maps, simple lay-out of structural steel, electrical symbols and architectural conventions.
Prerequisite: P. M. 1.

4. ENGINEERING PROBLEMS—(A) Sem. 2. 0+3, cr. 1.
Typical elementary problems from various fields to suggest to the student the nature and scope of engineering work. Lectures and problems are designed principally for an orientation course.

10. WOOD SHOP—(A) Sem. 1 or 2. 0+6, cr. 2.

Care and use of wood-working tools and machinery; with practice in the essentials of form work for simple concrete jobs, common scaffolding and frames, cribbing, roof and bridge trusses and the elements of pattern making.

Laboratory fee $6.00; *deposit* $4.00.

12. PATTERN MAKING—(A) Sem. 1 or 2. 0+6, cr. 2.

Covers the construction of the more common patterns, such as solid, split, cored and gated work. The course touches also upon match plate, stripper plate, and machine molding requirements.

Laboratory fee $6.00; *deposit* $4.00.

51. DESCRIPTIVE GEOMETRY—(B) Sem. 2. 1+3, cr. 2.

A study of points, lines, and planes in space including intersection of solids, development of surfaces and the principles of shades and shadows. Emphasis is placed on the solution of practical problems involving the theory covered.

Prerequisite: P. M. 2.

52. ELECTRICAL DRAWING.—(B) Sem. 2. 0+6, cr. 2.

Detail and assembly drawing of simple electrical machine parts, electrical conventions, schematic and connection circuit diagrams.

56. CABINET MAKING—(B) Sem. 1 or 2. 0+9, cr. 3.

Construction of common cabinet projects; including framing, case work, and finishing. The methods of both hand work and mill work are considered an integral part of the course.

57. ELEMENTARY WOOD WORKING—(B) Sem. 2. 0+9, cr. 3.

Hand work in wood and the use of hand tools with special emphasis on wood working suitable for the elementary grades. Includes work-play projects of instructional value to those grades.

58. MACHINE SHOP—(B) Sem. 1 or 2. 0+6, cr. 2.

Hand working of metals. Care and operation of common machine tools, as drill presses, lathes, shapers, millers, grinders, and saws. Work is done to explain the usual operation of these tools.

Laboratory fee $6.00; *deposit* $4.00.

59. FARM MECHANICS—(B) Sem. 2. 0+9, cr. 3.

Covers the manipulation of common farm hand tools and furnishes practice in making small equipment such as hog feeders, sprouters, gates, corn testers, and roofs. Includes soldering, welding, rope splicing, harness repairing, machine repair, the operation of gas engines, and the running of levels for farm drainage.

60. MACHINE SHOP AND FORGE—(B) Sem. 2. 0+6, cr. 2.

Elements of machine and tool making with the necessary auxiliary work in hardening, tempering, drawing, and punch press performance. Simple forging, oxyacetylene welding and cutting, brazing and heat treating are touched upon.

Prerequisite: P. M. 58.

Laboratory fee $6.00; *deposit* $4.00.

61. FOUNDRY—(B) Sem. 1 or 2. 0+6, cr. 2.
The making of bench and floor moulds, green and baked sand cores, aluminum and brass furnace practice and operation. Cupola practice for cast iron with the determination of charges and the composition of the resulting castings.
Laboratory fee $6.00; *deposit* $4.00.

113. FURNITURE DRAWING—(C) Sem. 1. 0+6, cr. 2.
The fundamental principles governing the design of furniture. Covers the styles, general construction features, and details of the various pieces of different periods.

116. GENERAL SHOP DRAWING—(C) Sem. 2. 0+6, cr. 2.
Design and representation of projects and equipment used in the general shop courses, such as electric circuits, ignition circuits, radio hook-ups, sheet metal projects, plumbing layouts, and bent metal projects.

117. ARCHITECTURAL DRAWING—(C) Sem. 1. 0+6, cr. 2.
Plans, elevations, perspective, and construction details of simple frame buildings, as garages and simple frame houses.

151. GENERAL SHOP I—(D) Sem. 1. 0+9, cr. 3.
Care and use of shop equipment employed for the following work: concrete form building, electricity, general woodwork repair, plumbing repair, painting, glazing, and sheet metal work.
Laboratory fee $6.00; *deposit* $4.00.

152. GENERAL SHOP II—(D) Sem. 2. 0+9, cr. 3.
Care and use of general shop equipment employed in the following work: forging, soldering, simple auto repairing, and the cold handling of metals, as drilling, threading, bending, riveting, and sawing.
Laboratory fee $6.00; *deposit* $4.00.

THE CURRICULUM IN INDUSTRIAL ARTS

The curriculum in Industrial Arts leads to the degree of Bachelor of Arts and is designed primarily to meet the needs of students who expect to direct such work in the public schools.

Freshman Year

Industrial Arts students take the work of the regular Liberal Arts freshman year.

Sophomore Year

First Semester	Cr.	*Second Semester*	Cr.
Sophomore Constant	6	Sophomore Constant	6
Psych. 51. General Psychology	3	Psych. 52. Educational Psychology	3
P. M. 1. Engineering Drawing	2	P. M. 2. Engineering Drawing	2
P. M. 10. Wood Shop	2	P. M. 56. Cabinet Making	3
Elective	3	Elective	2
	16		16

Junior Year

	First Semester	Cr.		*Second Semester*	Cr.
Physics 51.	General Physics	4	Physics 52.	General Physics	4
P. M. 12.	Pattern Making or		P. M. 58.	Machine Shop	2
P. M. 61.	Foundry	2	P. M. 116.	General Shop Drawing.	2
P. M. 113.	Furniture Drawing or		I. A. 102.	Vocational Education	2
P. M. 117.	Architectural Drawing.	2	Ed. 119.	Secondary Education	3
Ed. 113.	General History of Education	3	Art. 52.	Composition	2
Art. 51.	Composition	2	Art. 134.	History of Ornament	1
Elective		3			16
		16			

Senior Year

	First Semester	Cr.		*Second Semester*	Cr.
P. M. 151.	General Shop	3	P. M. 152.	General Shop	3
I. A. 155.	Occupational Analysis	2	I. A. 153.	Vocational Guidance	3
I. A. 156.	Teaching Industrial Arts	3	Psych. 121.	Tests and Measurements for secondary schools	3
M. E. 169.	Mfg. Methods	2	Ed. 191.	Supervised Teaching	3
Ed. 151.	Principles of Teaching.	3	Elective		4
B. M. 101.	Survey of Business Activities	3			16
		16			

COURSES IN INDUSTRIAL ARTS

101. INDUSTRIAL EDUCATION—(C) Sem. 1. Cr. 3.

Industrial arts education in the public schools is covered by this course; including its history, development, and present tendencies. Its co-ordination and functioning with branches of education are given special study.

102. VOCATIONAL EDUCATION—(C) Sem. 2. Cr. 2.

A course dealing with vocational education as it affects social and industrial life; covering its general purpose and economic value, and its present trend of development in relation to state and national vocational education laws. The supervision of vocational education in the public schools is given consideration.

153. VOCATIONAL GUIDANCE—(D) Sem. 2. Cr. 3.

A course covering methods and procedure for imparting to young people pertinent information relating to the selection of a vocation

154. CONTINUATION AND PART TIME EDUCATION—(D) Sem. 1. Cr. 2.

The organization and functioning of these special schools is covered by this course. Attention is given also to the particular demands which they meet.

155. OCCUPATIONAL ANALYSIS—(D) Sem. 1, Cr. 2.

The technique of analyzing the acts of a worker for information to be applied in industrial education or vocational education or guidance.

156. TEACHING INDUSTRIAL ARTS—(D) Sem. 1. Cr. 3.

A comparative analysis of the methods for teaching industrial arts, as developed from theory and practice.

THE DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

A major consists of a minimum of twenty-four credit hours, exclusive of English 1 and 2, 51 and 52; a minor of a minimum of twelve credit-hours, exclusive of English 1 and 2; 51 and 52.

The courses selected for a general major should be distributed as follows:

Composition: Cr. 6, to be chosen from English 61, 62, 126.

English Literature: Cr. 9, to be chosen from English 53, 55, 106, 107, 111, 112, 115, 163, 166, 167, 170.

American Literature: Cr. 6, to be chosen from English 56, 109, 122.

Oral Expression: Cr. 6, to be chosen from English 101, 102, 103, 104.

Students may also major in English Literature, in which case they are advised to include English History among their electives and to acquire a reading knowledge of a foreign language.

For the three-year program preparing for *Journalism* the student should complete the freshman and sophomore constants and select courses from the following groups: English 55, 56, 61, 62, 106, 107, 126, 131, 132, 165, 167, 170; History 51, 52, 101, 102, 111, 112, 131, 132, 133, Economics 51, 52, 101, 151; Political Science 51, 52, 151, 154, 155; Sociology 51, 52; Philosophy 51, 52, 101, 121; Psychology 51.

This work must total at least 90 credits.

Students who intend to apply for admission to an approved *library school* on the completion of their college work, should select their courses from the following groups: English Literature, Speech, Modern Languages, Latin, History, Economics, Political Science, Sociology, Psychology, Philosophy, Education, and one or more of the following sciences: Botany, Geology, Zoology, Physics, Chemistry.

COURSES IN ENGLISH LANGUAGE AND LITERATURE

01. PRE-COLLEGE ENGLISH. Sem 1 and 2, Cr. 0.

A non-credit course required of all first-year students who fail to pass the preliminary test in English. Upon recommendation of the instructor, a student enrolled in this course may be transferred to English, but not later than the end of the first month.

02. ENGLISH FOR FOREIGN STUDENTS. Sem. 1 and 2, Cr. 0.

A non-credit course required of all students whose command of English is not sufficient for the satisfactory performance of their general university work. All foreign students, not excused by the head of the department, will be assigned to the course upon entrance to the University. Students who do superior work may receive credit for English 1. The course offers practical instruction in the understanding of spoken English, in the interpretation of the printed page, and in self-expresson in both speaking and writing.

1. LANGUAGE AND COMPOSITION—(A) Sem. 1, Cr. 3.

A study and practice of good writing, with emphasis on exposition. Short and long themes, collateral reading, conferences. Required of all students.

2. LANGUAGE AND COMPOSITION—(A) Sem. 2, Cr. 3.
Continuation of English 1.
Prerequisite: English 1.

51. TYPES OF LITERATURE AND COMPOSITION—(B) Sem. 1, Cr. 2.
The writing of weekly papers in connection with the reading of Nineteenth and Twentieth Century prose.
Prerequisite: English 1 and 2.

52. TYPES OF LITERATURE AND COMPOSITION—(B) Sem. 2, Cr. 2.
Continuation of English 51.
Prerequisite: English 51.

53. INTRODUCTION TO THE STUDY OF LITERATURE—(B) Sem. 1, Cr. 3.
A study of the types of literature, with special attention to literary form as portrayed by the great masters. Collateral readings and lectures.

55. SURVEY OF ENGLISH LITERATURE—(B) Sem. 1, Cr. 3.
A survey of English literature from Beowulf to the close of the 19th Century with emphasis on the significant writers and movements.

56. SURVEY OF AMERICAN LITERATURE—(B) Sem. 2, Cr. 3.
A survey of American literature, tracing its development in relation to national conditions and thought. Text, lectures, and reports.

61. EXPOSITION—(B) Sem. 1, Cr. 2.
A study of the principles of expository writing. Themes and conferences.
Prerequisite: English 2.

62. NARRATION—(B) Sem. 2, Cr. 2.
A study of the plot, characterization, and setting in the modern novel and short story. Themes and conferences.
Prerequisite: English 2.

106. SHAKESPEARE—(C) Sem. 1, Cr. 3.
Analysis of the literary and dramatic art, as represented in four of Shakespeare's plays, with some consideration of his age and his development as a playwright. Lectures and discussion.

107. SHAKESPEARE—(C) Sem. 2, Cr. 3.
Continuation of English 106.
Prerequisite: English 106.

109. TRANSCENDENTAL LITERATURE—(C) Sem. 2, Cr. 2.
A study of Emerson and his school and his influence on American thought and literature. Special emphasis will be placed upon Emerson's writings and lectures.
Alternates with English 126.

111. NINETEENTH CENTURY ESSAY—(C) Sem. 1, Cr. 3.
A critical study of the works of masters of modern English prose: Haslitt, Macaulay, Lamb, De Quincy, Carlyle, Ruskin, Arnold, Newman, and Stevenson.
Alternates with English 167.

112. EIGHTEENTH CENTURY LITERATURE—(C) Sem. 2, Cr. 2.
Lectures on the literary tendencies and representative authors of the dawn of the Romantic period in English literature.
(Omitted 1928-1929.)

115. NINETEENTH CENTURY ENGLISH POETS—(C) Sem. 1, Cr. 3.
A study of the poets from Wordsworth to Tennyson with emphasis on their classicism, poetic technique, and philosophy of life.

122. AMERICAN POETRY—(C) Sem. 2, Cr. 2.
A study of American poets as they express American thought.

126. SHORT STORY WRITING—(C) Sem. 2, Cr. 2.
A study of narrative and descriptive prose and the art of modern prose fiction. The short story is selected for discussion and practice.

131. NEWS WRITING—(C) Sem. 1, Cr. 2.
An introduction to the principles of news-writing. Study of newspaper organizations and methods. One lecture and one three-hour laboratory period each week. All written work is done on the typewriter.

132. COLLEGE JOURNALISM—(C) Sem. 2, Cr. 1.
Work on the "Torch," with weekly conferences. Open only to members of the "Torch" staff who have completed English 131.

144. VERSIFICATION—(C) Sem. 1, Cr. 2.
The principles, function, and values of English verse.

163. ENGLISH DRAMA—(D) Sem. 1, Cr. 2.
History of the Elizabethan drama to 1642; study of the works of the chief dramatists from Lyly to Shirley.
Alternates with English 193.

165. THE DRAMA IN AMERICA—(D) Sem. 1, Cr. 2.
The development of American drama with special emphasis on its present-day tendencies.

166. THE MODERN ENGLISH DRAMA—(D) Sem. 2, Cr. 2.
The development of English drama during the last fifty years, with a consideration of the foreign dramatists who have influenced it.
Alternates with English 196.

167. THE NOVEL. Sem. 1, Cr. 3.
A study of some of the chief novelists of the past century from Jane Austin to the present. This course is designed to study the novel as an interpretation of life.
Alternates with English 111.
(Omitted 1928-1929.)

170. SPENSER TO MILTON—(D) Sem. 2, Cr. 3.
Critical study of the authors, exclusive of the dramatists. Milton's works and their influence on education, history, and religious, political, and personal liberty will receive special attention.
Alternates with English 176.
(Omitted 1928-1929.)

176. THE BIBLE AS LITERATURE—(C) Sem. 2, Cr. 3.

This course is to present the Bible as a great piece of literature. A study of the aesthetic power of the various literary forms found in it.

Alternates with English 170.

193. ANGLO-SAXON—(D) Sem. 1, Cr. 2.

Elements of the language, its relation to modern English. An introduction to its literature.

Open to students of junior and senior standing in English. A reading knowledge of German is desirable.

Alternates with English 163.

(Omitted 1928-1929.)

196. MIDDLE ENGLISH—(D) Sem. 2, Cr. 2.

Cross-reference to Latin 31.

Alternates with English 166.

(Omitted 1928-29.)

Latin 31. Attention is directed to the course in Mythology offered in the Department of Latin. Valuable for students of English.

COURSES IN PUBLIC SPEAKING

The courses offered are of practical value to all students. They aim to develop accuracy of thought and speech.

56-57. FUNDAMENTALS OF SPEAKING—(B) Yr. Each Sem. Cr. 1.

A course designed to secure power and ease in the presentation to a popular audience of topics of general interest.

101. PUBLIC SPEAKING—(C) Sem. 1, Cr. 3.

The study and practice of the conversational mode of speaking; development of clear thinking and enunciation; pronunciation based upon phonetic principles; the diagnosis and cure of faulty speech.

Prerequisite: English 2, or an equivalent.

102. PUBLIC SPEAKING—(C) Sem. 2, Cr. 3.

A continuation of course 51. Original speeches, prepared for special occasions; practice in selecting, outlining, and delivering speech material. Study in delivery. The informal talk. Formal public address. Extempore speeches.

Prerequisite: English 101, or an equivalent.

103. ARGUMENTATION—(C) Sem. 1, Cr. 3.

This course is of special value to Pre-Law students. Intensive study of analysis, evidence, kinds of evidence, kinds of argument and fallacies, brief drawing, rebuttal, and the preparation of forensics.

Prerequisite: English 2, or an equivalent.

104. DEBATE SEMINAR—(C) Sem. 2, Cr. 3.

Investigation of special propositions. A study of the art of debate. Practice in class drill. Designed especially to prepare for formal debate.

Prerequisite: English 103, or an equivalent.

THE DEPARTMENT OF FINE ARTS

Art and Music

A. ART

The Division of Art offers two curricula:

1. A four-year course arranged for those desiring a thorough training in drawing and painting for Art as a life work. The classes in composition, illustration, poster design, etc., prepare students for professional work upon graduation.

2. A four-year course designed to train teachers and supervisors of Art. Strong emphasis is laid upon training in Art, in order that the supervisor may be an artist as well as a teacher.

In addition to meeting the requirements for admission to the College of Liberal Arts, the applicant must also present one unit in high school drawing or must complete without credit a pre-college course in drawing.

I. THE GENERAL CURRICULUM IN ART

Freshman Year

	First Semester	Cr.		*Second Semester*	Cr.
	Freshman Constant	14		Freshman Constant	14
Art. 1.	Cast Drawing	1	Art 2.	Cast Drawing	1
Art. 5.	Still Life	1	Art 6.	Still Life	1
		16			16

Sophomore Year

	First Semester	Cr.		*Second Semester*	Cr.
	Sophomore Constant	6		Sophomore Constant	6
Art 51.	Composition	2	Art 52.	Composition	2
Art 55.	Still Life	2	Art 56.	Still Life	2
Art 59.	Sketch	1	Art 60.	Sketch	1
Art 63.	Illustration	1	Art 64.	Illustration	1
Art 67.	Surface Design	1	Art 68.	Surface Design	1
	Elective	3		Elective	3
		16			16

Junior Year

	First Semester	Cr.		*Second Semester*	Cr.
Art 101.	Composition	1	Art 102.	Composition	1
Art 105.	Life	2	Art 106.	Life	2
Art 109.	Sketch	1	Art 110.	Sketch	1
Art 113.	Illustration	1	Art 114.	Illustration	1
Art 116.	History of Fine Arts	2	Art 117.	History of Fine Arts	2
Art 119.	Surface Design	1	Art 120.	Poster Design	1
	Science	4-5		Science	4-5
	Elective	4-3		Elective	4-3
		16			16

Senior Year

(Not offered until 1929-1930)

	First Semester	Cr.		*Second Semester*	Cr.
Art 151.	History of American Art.	2	Art 152.	History of American Art.	2
Art 157.	Life	2	Art 158.	Life	2
Art 163.	Water Color	2	Art 164.	Water Color	2
Art 169.	Illustration	2	Art 170.	Illustration	2
Art 175.	Decorative Design	1	Art 176.	Decorative Design	1
Art 181.	Portrait	2	Art 182.	Portrait	2
Art 187.	Composition	1	Art 192.	Outdoor Sketching	1
	Elective	4		Elective	4
		16			16

Suggested Electives: History and English.
Suggested Sciences: Botany, Physics, or Zoology.

II. THE CURRICULUM IN PUBLIC SCHOOL ART

Freshman Year

	First Semester	Cr.		*Second Semester*	Cr.
	Freshman Constant	14		Freshman Constant	14
Art 1.	Cast Drawing	1	Art 2.	Cast Drawing	1
Art 5.	Still Life	1	Art 6.	Still Life	1
		16			16

Sophomore Year

	First Semester	Cr.		*Second Semester*	Cr.
	Sophomore Constant	6		Sophomore Constant	6
Art 51.	Composition	2	Art 52.	Composition	2
Art 55.	Still Life	2	Art 56.	Still Life	2
Art 59.	Sketch	1	Art 60.	Sketch	1
Art 73.	Perspective and Lettering	1	Art 78.	Life	1
Psy. 51.	General Psychology	3	Psy. 52.	Educational Psychology	3
		15			15

Junior Year

	First Semester	Cr.		*Second Semester*	Cr.
	Science	4-5		Science	4-5
Art 101.	Composition	1	Art 102.	Composition	1
Art 105.	Life	2	Art 106.	Life	2
Art 119.	Surface Design	1	Art 120.	Poster Design	1
Art 125.	Block Printing	2	Art 130.	Interior Decoration	1
Ed. 113.	General History of Education	3	Art 134.	History of Ornament	1
			Art 138.	Pen and Ink	1
	Elective	3-2	Ed. 119.	Secondary Education	3
				Elective	2-0
		16			15

Senior Year

(Not offered until 1929-1930)

	First Semester	Cr.		*Second Semester*	Cr.
Art 151.	History of American Art.	2	Art 152.	History of American Art.	2
Art 157.	Life	2	Art 158.	Life	2
Art 163.	Water Color	2	Art 164.	Water Color	2
Art 169.	Illustration	2	Art 170.	Illustration	2
Art 175.	Decorative Design	1	Art 176.	Decorative Design	1
Art 187.	Composition	1	Art 192.	Outdoor Sketching	1
Art 199.	Public School Art Methods	3	Art 196.	Commercial Art	2
Ed. 151.	Principles of Teaching	3	Ed. 191.	Supervised Teaching	3
		16			16

COURSES IN ART

1-2. CAST DRAWING—(A) Yr. Each sem., cr. 1.
Drawing and sketching with pencil and charcoal from the cast, in line, light and shadow.
Studio 6 hours.

5-6. STILL LIFE—(A) Yr. Each sem., cr. 1.
Drawing and painting in water painting and charcoal from still life objects.
Studio 6 hours.

51-52. COMPOSITION—(B) Yr. Each sem., 2 hrs., cr. 2.
Arrangement of lines and spaces, balance.
Prerequisites: Art 1, 2, 5, and 6.
Open to students in Industrial Art.

55-56. STILL LIFE—(B) Yr. Each sem., cr. 2.
Continuation of Art 5 and 6.
Studio 12 hours.
Prerequisite: Art 5 and 6.

59-60. SKETCH—(B) Yr. Each sem., cr. 1.
Sketching with pencil and charcoal interiors.
Prerequisites: Art 1, 2, 5, and 6.

63-64. ILLUSTRATION—(B) Yr. Each sem., cr. 1.
Problems in pictorial representation. Presenting ideas by means of form and color.
Prerequisite: Art 51 and 52.

67-68. SURFACE DESIGN—(B) Yr. Each sem., cr. 1.
Problems in the arrangement of black and white. Conventional forms. Original patterns.
Prerequisite: Art 1, 2, 5, and 6.

73. PERSPECTIVE AND LETTERING—(B) Sem. 1, cr. 1.
The science of perspective; reflections, cast shadows.
Principles of lettering and application to various types of work.
Prerequisite: Art 1, 2, 5, and 6.

78. LIFE—(B) Sem. 2, cr. 1.
Drawing and painting in charcoal and oil.
Studio 6 hours.
Prerequisite: Art 1, 2, 5, and 6.

101-102. Composition—(C) Yr. Each sem., cr. 1.
Continuation of Art 51 and 52.
Prerequisite: Art 51 and 52.

105-106. LIFE—(C) Yr. Each sem., cr. 2.
Continuation of Art 78.
Studio 12 hours.
Prerequisite: Art 78.

109-110. SKETCH—(C) Yr. Each sem., cr. 1.
Continuation of Art 59 and 60.
Prerequisite: Art 59 and 60.

113-114. ILLUSTRATION—(C) Yr. Each sem., cr. 1.
Continuation of Art 63 and 64.
Prerequisite: Art 63 and 64.

116-117. HISTORY OF FINE ARTS—(C) Yr. Each sem., cr. 2.
Lecture course on the history of painting, sculpture, and architecture from the pre-Greek period to modern times.

119. SURFACE DESIGN—(C) Sem. 1, cr. 1.
Continuation of Art 67 and 68.
Prerequisite: Art 1, 2, 5, and 6.

120. POSTER DESIGN—(C) Sem. 2, cr. 1.
Problems in original poster work.
Prerequisite: Art 67 and 68.

125. BLOCK PRINTING—(C) Sem. 1, cr. 2.
Use of linoleum block in reproducing simple design.

130. INTERIOR DECORATION—(C) Sem. 2, cr. 1.
Study of the principles of interior decoration. Rendering of plans and sketches of original interiors.
Prerequisite: Art 51, 52, 59, and 60.

134. HISTORY OF ORNAMENT—(C) Sem. 2, cr. 1.
History and evolution of the different periods of ornament.

138. PEN AND INK—(C) Sem. 2, cr. 1.
Drawing with pen and ink, interior and landscapes. Pen and ink technique.
Prerequisite: Art 1, 2, and 56.

151-152. HISTORY OF AMERICAN ART—(D) Yr. Each sem., cr. 2.
History of American painting and sculpture.
Prerequisite: Art 116 and 117.
(Omitted 1928-29.)

157-158. LIFE—(D) Yr. Each sem., cr. 2.
Continuation of Art 105 and 106.
Studio 12 hours.
Prerequisite: Art 105 and 106.
(Omitted 1928-29.)

163-164. WATER COLOR—(D) Yr. Each sem., cr. 2.
Study of water color technique and rendering.
Studio 12 hours.
Prerequisite: Art 1, 2, and 56.
(Omitted 1928-29.)

169-170. ILLUSTRATION—(D) Yr. Each sem., cr. 2.
Continuation of Art 113 and 114.
Prerequisite: Art 113 and 114.
(Omitted 1928-29.)

175-176. DECORATIVE DESIGN—(D) Yr. Each sem., cr. 1.
Design as applied to decorative problems, book-plates, cards, and magazine headings.
Prerequisite: Art 67, 68, and 119.
(Omitted 1928-29.)

181-182. PORTRAIT—(D) Yr. Each sem., cr. 2.
Painting in oils from model, head length.
Studio 12 hours.
Prerequisite: Art 105 and 106.
(Omitted 1928-29.)

187. COMPOSITION—(D) Sem. 1, cr. 1.
Continuation of Art 101 and 102.
Prerequisite: Art 101 and 102.
(Omitted 1928-29.)

192. OUTDOOR SKETCHING—(D) Sem. 2, cr. 1.
Sketching with water color, pencil, and charcoal from nature, landscape, and outdoor perspective.
Prerequisite: Art 59, 60, 109, and 110.
(Omitted 1928-29.)

196. COMMERCIAL ART—(D) Sem. 2, cr. 2.
Problems in commercial design; book and newspaper advertising and layouts.
Prerequisite: Art 1, 2, 56, 59, 60, 101, and 102.
(Omitted 1928-29.)

199. PUBLIC SCHOOL ART METHODS—(D) Sem. 1, cr. 3.
Study plans and content matter for the teaching of drawing in the respective grades. Methods of presenting material.
Prerequisite: Art 1, 2, 5, and 6.
(Omitted 1928-29.)

B. MUSIC

The Division of Music offers training, in accordance with approved standards and methods, to those who wish to become professional musicians, either as teachers or executants, and to those who desire music merely for its cultural advantages.

The Division offers two courses.

1. A four-year course with a major in Applied or Theoretical Music leading to the degree of Bachelor of Arts.

2. A four-year course leading to the degree of Bachelor of Music.

In addition to meeting the requirements for admission to the College of Liberal Arts, the applicant must also possess a reasonable amount of musical intelligence.

As a prerequisite for a major in piano, students must demonstrate by examination that they have completed the following training or its equivalent:

Heller Etudes Op. 46; Loeschorn Op. 66; the easier Haydn and Mozart Sonatas.

As a prerequisite for a major in violin, students must be well grounded in correct position, intonation, tone, and bowing and be prepared to be examined in any of the following preparatory materials or their equivalent:

The first six Pleyel Duos Op. 8 for two violins; Kayser Op. 20 Book II (omitting numbers 20 and 22).

Previous study is not a prerequisite for a major in voice.

As a prerequisite for a major in public school music, applicants must have a fair singing voice, a quick sense of tone and of rhythm and an elementary knowledge of piano.

Special Music Fees

In addition to the regular tuition fees, the following special music fees are charged:

One half-hour private lesson in Voice, Violin, Piano, etc., $2.00 per lesson.

Rental of practice room with piano for one daily practice hour, $5.00 per semester. For each additional practice hour, $5.00 per semester.

Unit of Credit

The unit for credit in Applied Music is estimated as follows:

1. Violin, Piano, etc.: One thirty-minute private lesson per week plus two hours daily practice for five days a week. One credit per semester.

2. Wind instruments: One thirty-minute private lesson per week plus one hour daily practice for five days a week. One credit per semester.

3. Voice: One thirty-minute private lesson per week plus one hour daily practice for five days a week. One credit per semester.

Student Recitals.—Music students are required to attend all recitals as a part of their regular work and perform in recitals when so directed by their instructors.

I. CURRICULUM IN APPLIED MUSIC WITH A MAJOR IN PIANO OR VIOLIN

(Leading to the degree of Bachelor of Arts.)

Freshman Year

	First Semester	Cr.		*Second Semester*	Cr.
	Freshman Constant	14		Freshman Constant	14
M. 1.	Sight Singing	½	M. 2.	Sight Singing	½
M. 3.	Ear Training	½	M. 4.	Ear Training	½
M. 49.	Piano or Violin.....	1	M. 50.	Piano or Violin.....	1
		16			16

Sophomore Year

		Sophomore Constant	6			Sophomore Constant	6
M.	51.	Sight Singing	½	M.	52.	Sight Singing	½
M.	55.	Ear Training	½	M.	56.	Ear Training	½
M.	57.	Harmony	3	M.	58.	Harmony	3
M.	59.	Keyboard Harmony	1	M.	60.	Keyboard Harmony	1
M.	61.	Piano or Violin.....	2	M.	62.	Piano or Violin.....	2
		Elective	3			Elective	3
			16				16

Junior Year

		First Semester	Cr.			*Second Semester*	Cr.
Phys.	51.	General Physics	4	Phys.	52.	General Physics	4
M.	105.	History of Music.....	2	M.	106.	History of Music.....	2
M.	107.	Harmony	2	M.	108.	Harmony	2
M.	109.	Keyboard Harmony	1	M.	110.	Keyboard Harmony	1
M.	111.	Piano or Violin.....	2	M.	112.	Piano or Violin.....	2
M.	139.	Instrumentation and Conducting	2	M.	140.	Instrumentation and Conducting	2
		Elective	3			Elective	3
			16				16

Senior Year

		First Semester	Cr.			*Second Semester*	Cr.
M.	151.	Composition	2	M.	152.	Composition	2
M.	155.	Counterpoint	2	M.	156.	Counterpoint	2
M.	161.	Piano or Violin.....	2	M.	162.	Piano or Violin.....	2
M.	175.	Form and Analysis.....	2	M.	176.	Form and Analysis.....	2
M.	195.	Senior Recital	3	M.	196.	Senior Recital	3
		Elective	5			Elective	5
			16				16

Note: Ensemble training is required each year without credit: orchestra for violin majors, piano ensemble for piano majors.

II. THE CURRICULUM IN APPLIED MUSIC WITH A MAJOR IN VOICE CULTURE

(Leading to the degree of Bachelor of Arts.)

Freshman Year

		First Semester	Cr.			*Second Semester*	Cr.
		Freshman Constant	14			Freshman Constant	14
M.	1.	Sight Singing	½	M.	2.	Sight Singing	½
M.	3.	Ear Training	½	M.	4.	Ear Training	½
M.	49Vo.	Voice	1	M.	50Vo.	Voice	1
			16				16

Sophomore Year

	First Semester	Cr.		*Second Semester*	Cr.
	Sophomore Constant	6		Sophomore Constant	6
M. 51.	Sight Singing	½	M. 52.	Sight Singing	½
M. 55.	Ear Training	½	M. 56.	Ear Training	½
M. 57.	Harmony	3	M. 58.	Harmony	3
M. 59.	Keyboard Harmony	1	M. 60.	Keyboard Harmony	1
M. 61Vo.	Voice	2	M. 62Vo.	Voice	2
	Elective	3		Elective	3
		16			16

Junior Year

	First Semester	Cr.		*Second Semester*	Cr.
Phys. 51.	General Physics	4	Phys. 52.	General Physics	4
M. 105.	History of Music	2	M. 106.	History of Music	2
M. 107.	Harmony	2	M. 108.	Harmony	2
M. 109.	Keyboard Harmony	1	M. 110.	Keyboard Harmony	1
M. 111Vo.	Voice	2	M. 112Vo.	Voice	2
M. 111P.	Piano	2	M. 112P.	Piano	2
	Elective	3		Elective	3
		16			16

Senior Year

	First Semester	Cr.		*Second Semester*	Cr.
M. 151.	Composition	2	M. 152.	Composition	2
M. 155.	Counterpoint	2	M. 156.	Counterpoint	2
M. 161Vo.	Voice	2	M. 162Vo.	Voice	2
M. 175.	Form and Analysis	2	M. 176.	Form and Analysis	2
M. 195Vo.	Senior Recital	3	M. 196Vo.	Senior Recital	3
	Elective	5		Elective	5
		16			16

Chorus is required each year without credit.

Piano required for graduation: Students with a major in voice must present work in piano equivalent to third grade proficiency.

III. THE CURRICULUM IN PUBLIC SCHOOL MUSIC

(Leading to the degree of Bachelor of Arts, with a major in Public School Music.)

Freshman Year

	First Semester	Cr.		*Second Semester*	Cr.
	Freshman Constant	14		Freshman Constant	14
M. 1.	Sight Singing	½	M. 2.	Sight Singing	½
M. 3.	Ear Training	½	M. 4.	Ear Training	½
M. 49Vo.	Voice	1	M. 50Vo.	Voice	1
		16			16

Sophomore Year

	First Semester	Cr.		*Second Semester*	Cr.
	Sophomore Constant ...	6		Sophomore Constant ...	6
Psy. 51.	General Psychology	3	Psy. 52.	Educational Psychology	3
M. 51.	Sight Singing	½	M. 52.	Sight Singing	½
M. 55.	Ear Training	½	M. 56.	Ear Training	½
M. 57.	Harmony	3	M. 57.	Harmony	3
M. 59.	Keyboard Harmony ...	1	M. 60.	Keyboard Harmony ...	1
M. 63Vo.	Voice	1	M. 64Vo.	Voice	1
M. 63P.	Piano	1	M. 64P.	Piano	1
		16			16

Junior Year

	First Semester	Cr.		*Second Semester*	Cr.
Ed. 113.	General History of Education	3	Ed. 119.	Secondary Education ..	3
Phys. 51.	General Physics	4	Phys. 52.	General Physics	4
M. 105.	History of Music.....	2	M. 106.	History of Music.....	2
M. 107.	Harmony	2	M. 108.	Harmony	2
M. 111Vo.	Voice	1	M. 112Vo.	Voice	1
M. 115.	Elementary Public School Methods	3	M. 116.	Elementary Public School Methods	3
M. 119.	Appreciation of Element. S. Music	1	M. 120.	Appreciation of Element. S. Music	1
		16			16

Senior Year

	First Semester	Cr.		*Second Semester*	Cr.
Ed. 151.	Principles of Teaching..	3	Ed. 191.	Supervised Teaching ...	3
M. 151.	Composition	2	M. 152.	Composition	2
M. 155.	Counterpoint	2	M. 156.	Counterpoint	2
M. 159.	Instrumentation and Conducting	2	M. 160.	Instrumentation and Conducting	2
M. 163.	Applied Music	1	M. 164.	Applied Music	1
M. 185.	Orchestral Instrument ..	1	M. 186.	Orchestral Instrument .	1
M. 191.	High School Music Methods	2	M. 192.	High School Music Methods	2
M. 193.	High School Music Appreciation	1	M. 194.	High School Music Appreciation	1
	Elective	2		Elective	2
		16			16

IV. THE CURRICULUM IN THEORY

(Leading to the degree of Bachelor of Arts with a major in Theory of Music.)

Freshman

	First Semester	Cr.		*Second Semester*	Cr.
	Freshman Constant	14		Freshman Constant	14
M. 1.	Sight Singing	½	M. 2.	Sight Singing	½
M. 3.	Ear Training	½	M. 4.	Ear Training	½
M. 49.	Applied Music	1	M. 50.	Applied Music	1
		16			16

Sophomore

	First Semester	Cr.		*Second Semester*	Cr.
	Sophomore Constant	6		Sophomore Constant	6
M. 57.	Harmony	3	M. 58.	Harmony	3
M. 51.	Sight Singing	½	M. 51.	Sight Singing	½
M. 55.	Ear Training	½	M. 56.	Ear Training	½
M. 61.	Piano, voice or organ	2	M. 62.	Piano, voice or organ	2
M. 59.	Keyboard Harmony	1	M. 60.	Keyboard Harmony	1
	Elective	3		Elective	3
		16			16

Junior

	First Semester	Cr.		*Second Semester*	Cr.
Phys. 51.	General Physics	4	Phys. 52.	General Physics	4
M. 155.	Counterpoint	2	M. 156.	Counterpoint	2
M. 105.	History of Music	2	M. 108.	Harmony	2
M. 107.	Harmony	2	M. 111.	Piano, voice or organ (Class and ensemble)	2
M. 111.	Piano, voice or organ (Class and ensemble)	2	M. 126.	Choral Composition	2
M. 125.	Choral Composition	2		Elective	2
	Elective	2			16
		16			

Senior

	First Semester	Cr.		*Second Semester*	Cr.
M. 167.	Orchestration	2	M. 168.	Orchestration	2
M. 177.	Teaching of Theory	2	M. 178.	Teaching of Theory	2
M. 165.	History of Music	2	M. 166.	History of Music	2
M. 169.	Harmonic Analysis	2	M. 170.	Harmonic Analysis	2
M. 151.	Composition	2	M. 152.	Composition	2
M. 197.	Thesis or Original Composition	3	M. 198.	Thesis or Original Composition	3
	Elective	3		Elective	3
		16			16

Students who desire to qualify for work in *Church and Choral Music* should take their work in approximately the following sequence: In their freshman year, the freshman constant and Music 1, 2, 3, 4, 49, 50; in their sophomore year, the sophomore constant and Music 51, 52, 55, 56, 57, 58, 59, 60, 61, 62, and two electives; in their junior year, Physics 51, 52, Music 105, 106, 107, 108, 109, 110, 111, 112, Religion 121, 122, and two electives; in their senior year, Music 151, 152, 155, 156, 175, 176, 187, 188, 195, 196, and two electives.

V. THE CURRICULUM IN APPLIED MUSIC

(Leading to the Degree of Bachelor of Music.)

The entrance requirements for this degree are the same as for the degree of Bachelor of Arts and in addition three years of work in piano. If the student lacks some of this work, he may study and meet this requirement during his first two years, previous to his major work in Applied Music.

The College requirements include the Freshman and Sophomore Constants and the following sequences:

(a) A major in Theory: Music 1, 2, 3, 4, 51, 52, 55, 56, 57, 58, 59, 60, 105, 106, 107, 108, 109, 110, 139, 140, 151, 152, 155, 156, 175, and 176.

(b) A major in Applied Music, either in Piano, Violin, or Voice: Music 49, 50, 61, 62, 111, 112, 161, 162, 195, 196.

(c) Cultural Electives: English 55, 56, 115, and 122; Physics 51, 52; and History 51 and 52.

Students who enter with advanced standing in Music and related subjects, but who present no credits in a science or a foreign language will continue their work in the above curriculum.

COURSES IN THE THEORY OF MUSIC

1-2. SIGHT SINGING—(A) Yr. Each semester, Cr. ½.
Drill in scale and interval singing. Easy time subdivisions. Notation. Two-part singing. One hour a week per semester for one year.

3-4. EAR TRAINING—(A) Yr. Each semester, Cr. ½.
Major and minor scales; intervals and elementary rhythmic problems. A study in writing different kinds of measure by hearing them played or sung. Melodic and harmonic intervals and simple chromatic problems. One hour a week per semester for one year.

51-52. SIGHT SINGING—(B) Yr. Each semester, Cr. ½.
Motives and short phrases. Two and three part exercises and simple modulation. Exercises in period writing; a study of chords. One hour a week per semester for one year.

55-56. EAR TRAINING II—(B) Yr. Each semester, Cr. ½.
Continuation of Music 3 and 4. One hour a week per semester for one year.
Prerequisite: Music 3 and 4.

57-58. HARMONY—(B) Yr. Each semester, Cr. 3.

A course in writing scales, intervals, and the different triads. The harmonizations of easy melodies with the principal triads. The principal dissonant chords and their resolution in the harmonization of melodies. The use of secondary triads and easy modulations.

59-60. KEYBOARD HARMONY—(B) Yr. Each semester, Cr. 1.

Practical application of the triads of the first year harmony at the keyboard. Chord progressions, cadence formulas, and key circle sequences, making use of the scale triads.

105-106. HISTORY OF MUSIC. Yr. Each semester, Cr. 2.

Music of primitive nations. The music and instruments of the Bible. Music of the early Christian Church. Rise and development of the liturgy. Notation. Music and the Renaissance. The polyphonic age. The rise of opera and oratorio. The periods of Bach and Handel, Haydn and Mozart The advent of Beethoven. The rise of virtuosity and romanticism. Wagner and the new operative tendencies. American music development. Collateral reading, preparation of themes, and outlines during both semesters.

107-108. HARMONY—(C) Yr. Each semester, Cr. 2.

Secondary seventh chords and their inversions. Altered chords, chromatic melodies, passing notes, suspensions, advanced modulation, and the harmonization of chorals.

Prerequisite: Music 57 and 58.

109-110. KEYBOARD HARMONY—(C) Yr. Each semester, Cr. 1.

Many of the principles of the second year harmony are applied. Dominant sevenths, and diminished seventh chords. Modulating key-circle sequences. Extended cadence formulas with chromatic changes.

Prerequisite: Music 59-60.

115-116. ELEMENTARY SCHOOL MUSIC METHODS. Yr. Each semester, Cr. 3.

Music in the primary grades: Selection and presentation of rote songs; The child voice in singing; The monotone; The introduction of staff notation; Simple rhythms; Music in the intermediate grades; Further music-reading introducing tonal and rhythmic problems.

119-120. APPRECIATION OF ELEMENTARY SCHOOL MUSIC—(C) Yr. Each semester, Cr. 1.

To promote the understanding and enjoyment of good music is the aim of musical education in the schools. This course acquaints the student with the problems and best methods of cultivating musical appreciation in elementary school children.

125-126. CHORAL COMPOSITION—(C) Yr. Each semester, Cr. 2.

Exercises in the application of both poetry and prose to musical forms. Hymn tunes, duets, trios, quartettes for various combinations of voices. The hymn anthem, the full anthem, the solo anthem. Cantatas with piano or organ accompaniment.

(Omitted 1928-29.)

139-140. INSTRUMENTATION AND CONDUCTING—(C) Yr. Each semester, Cr. 2.

Development of the orchestra and orchestral instruments. Explanation

of all orchestral instruments, compasses, characteristics, tonal effects, etc.; the making and reading of orchestral scores; the arranging and scoring of the simpler forms. The fundamentals of conducting with individual practice.

149-150. CHORUS MANAGEMENT AND DIRECTING—(D) Yr. Each semester, Cr. 1.

The fundamentals of chorus conducting are studied, accompanied by much individual practice in conducting.

151-152. COMPOSITION—(D) Yr. Each semester, Cr. 2.

Exercises in writing sections, phrases, periods, small two and three part primary forms and large two and three part primary forms.

(Omitted 1928-29.)

155-156. COUNTERPOINT—(D) Yr. Each semester, Cr. 2.

Counterpoint in two, three, and four parts in the various species. This course enables the student to secure facility in composition and is also valuable from an historical and artistic standpoint.

165-166. HISTORY OF MUSIC—(D) Yr. Each semester, Cr. 2.

A more detailed and comprehensive study of the development of music; national schools of music; recent contemporary composers. Collateral reading, preparation of themes and outlines during both semesters.

Prerequisite: Music 106.

(Omitted 1928-29.)

167-168. ORCHESTRATION—(D) Yr. Each semester, Cr. 2.

The compasses, characteristics, and tonal effects of the orchestral instruments; the making and reading of orchestral scores.

(Omitted 1928-29.)

169-170. HARMONIC ANALYSIS—(D) Yr. Each semester, Cr. 2.

An analytical and experimental study of extended modulation, modal writing and chromatic harmony.

(Omitted 1928-29.)

175-176. FORM AND ANALYSIS—(D) Yr. Each semester, Cr. 2.

A study of the structure and aesthetic content of music. Primary and contrapuntal forms. Chord analysis. Small instrumental forms with examples from Schubert, Mendelsohn, Grieg, etc. Simple and compound primary forms. Preludes, inventions, and dance forms of Bach; rondo, theme with variations, art song.

177-178. TEACHING OF THEORY—(D) Yr. Each semester, Cr. 2.

A course in supervised teaching dealing with the materials at the teacher's disposal for the accomplishment of various purposes.

187. HISTORY OF CHURCH MUSIC—(D) Sem. 1, Cr. 2.

The historical aspects of church music, music in the religions of antiquity, in the early Christian Church, under Papal control. Changes induced by the Reformation. Colonial experience in church music.

188. HYMNOLOGY—(D) Sem. 1, Cr. 2.

A study of the hymns and songs of the early church. Greek and Latin hymns. Medieval hymns and plain song, Reformation hymns. Eighteenth and Nineteenth century developments in hymnology.

191-192. HIGH SCHOOL MUSIC METHODS—(D) Yr. Each semester, Cr. 2.

Music in Junior and Senior High School. The adolescent voice. Testing and classification of voices. Selection of suitable material. More difficult rhythmic problems. Two and three part singing. Public performances. School assembly. Programs. Qualifications of a supervisor. School music problems.

193-194. HIGH SCHOOL MUSIC APPRECIATION—(D) Yr. Each semester, Cr. 1.

Different methods of presentation; rhythm; melody; harmony, program music; the Orchestra; composers; cultured rondo, theme with variations, art song.

195-196. PUBLIC WORK IN CHAPEL SERVICES—(D) Yr. Each semester, Cr. 3.

Performance on the piano or organ and conducting of one of the choirs at chapel services.

197-198. THESIS OR ORIGINAL COMPOSITION—(D)

(Omitted 1928-29.)

COURSES IN APPLIED MUSIC

Piano

49-50P. PIANO—(A) Yr. Each semester, Cr. 1.

Relaxation is stressed in the various technical exercises; variety of touches used in playing scales, arpeggios, and chords. Études used are Op. 299 Czerny, Op. 46 Heller, Op. 66 Loeschhorn, Inventions, Bach. To Spring, Butterfly and March of the Dwarfs by Grieg, Dance Rustique and Spring Dawn by Mason, Polish Dance by Scharmenka.

61-62P. PIANO—(B) Yr. Each semester, Cr. 2.

Hanon, Virtuoso Studies, Tausig-Ehrlich, Daily Studies; Czerny, Op. 740 and Cramer-Bulow, Études; Grieg, E. Minor Sonata; Beethoven, C. Minor Sonata; Chopin, Preludes, Mendelsohn, Rondo Capriccioso.

Prerequisite: Music 49-50P.

63-64P. PIANO—(B) Yr. Each semester, Cr. 1.

A reasonable number of selections from Music 61-62P.

Prerequisite: Music 50P.

111-112P. PIANO—(C) Yr. Each semester, Cr. 2.

Mascheles, Op. 70; Clementi, Gradus ad Parnassum; Schumann, Op. 12 and Novellette, Op. 21; Chopin, Ballads; Bach, Preludes and Fugues; Brahms, Rhapsodies and pieces of equal difficulty.

Prerequisite: Music 61-62P.

161-162P. PIANO—(D) Yr. Each semester, Cr. 2.

Chopin, Études; Rubinstein, Études; Schubert-Tausig, Military March; Sonatas and Concertos by classic and romantic writers.

Prerequisite: Music 111-112P.

163-164P. PIANO—(D) Yr. Each semester, Cr. 1.

A reasonable number of selections from Music 111-112P.

Prerequisite: Music 64P.

195-196P. SENIOR RECITAL—(D) Yr. Each semester, Cr. 3.

A recital must be played without notes at the end of the senior year. A sonata or concerto, besides groups of smaller compositions will comprise the program.

Prerequisite: Music 112P.

Violin

49-50Vi. VIOLIN—(A) Yr. Each semester, Cr. 1.

Hubert Reiss Violin School, Bk. 2 (Beginning with second position studies). Hans Sitt Scale Studies (Supplementary to Schradiech). Sevcik Changes of Position. Danclas Airs Varies Op. 89. Pieces by Mozart—Papini—Dancla—Bohm, Raff, etc. (A graceful, natural, and effective method of holding the violin and bow, as well as in the general playing position of the student is insisted upon.)

61-62Vi. VIOLIN—(B) Yr. Each semester, Cr. 2.

Hans Sitt Scales continued. Casorti—Technics of the Bow, Mazas Op. 36, Book 1. Kreutzer's 42 Études (omitting No. 1 and the double stop Études). The pupil should begin to show some skill. Bowing and intonation will be sharply criticised. Solos by classic and modern composers. Concertos Accolay.

111-112Vi. VIOLIN—(C) Yr. Each semester, Cr. 2.

Hermann preparatory double stop Études. Kreutzer double stop Études. Mazas Op. 36 Bk. II. Sonatas by Handel, Mozart, etc.; Concertos by Dancla, Nardini, Seitz, etc. Pieces or corresponding difficulty to meet needs and style of student.

Prerequisite: Music 62Vi.

161-162Vi. VIOLIN—(D) Yr. Each semester, Cr. 2.

Fiorillo, Rode, Kreutzer, Ravell, Gavinie, Concertos by Deberiot, Viotti, Mozart.

Prerequisite: Music 112Vi.

195-196Vi. VIOLIN—(D) Yr. Each semester, Cr. 3.

A Senior Recital program is given, selected by the instructor, the numbers depending largely upon the ability and style of the individual student. A sonata, concerto and groups of the more important works of standard classic and modern composers will comprise the program.

Prerequisite: Music 162Vi.

Voice

49-50Vo. VOICE—(A) Yr. Each semester, Cr. 1.

Breath control; tone production; correct diction; vocalises involving major and minor scales, simple arpeggios, embellishments and phrasing. Concone, Marzo, Sieber or Marchesi.

61-62Vo. VOICE—(B) Yr. Each semester, Cr. 2.

Continued work in technic of breathing, tone placing and phrasing. Selected arias from operas and oratorios. Art songs. Easy ensemble numbers.

63-64Vo. VOICE—(B) Yr. Each semester, Cr. 1.
Continued work in technic of breathing, tone placing and phrasing. Art songs, song ensemble numbers.
Prerequisite: Music 50Vo.

111-112Vo. VOICE—(C) Yr. Each semester, Cr. 2.
Further drill in vocal technic. Songs of advanced grade from classics and modern composers. Ensemble singing from standard operas, oratorios, and cantatas. Student and public recitals.
Prerequisite: Music 62Vo.

113-114Vo. VOICE—(C) Yr. Each semester, Cr. 1.
Further drill in vocal technic. Songs of advanced grade from classics and modern composers. Selected arias from operas and oratorios.
Prerequisite: Music 64Vo.

161-162Vo. VOICE—(D) Yr. Each semester, Cr. 2.
An extensive repertoire from best song literature. Performance of one complete role from a standard opera or oratorio.
Prerequisite: Music 112Vo.

163-164Vo. VOICE—(D) Yr. Each semester, Cr. 1.
A fair repertoire from the best song literature. A study of one complete role from a standard opera or oratorio.
Prerequisite: Music 114Vo.

195-196Vo. VOICE—(D) Yr. Each semester, Cr. 3.
Senior Recital including an aria, a group of classic songs and a group of modern songs. Recital to count as final examination.
Prerequisite: Music 162Vo.

Orchestral Instruments

141-142. ORCHESTRAL INSTRUMENT—(C) Yr. Each semester, Cr. 1.
Applied work in stringed or wind instruments as preparation for conducting school bands and orchestras.

185-186. ORCHESTRAL INSTRUMENT—(D) Yr. Each semester, Cr. 1.
Applied work in stringed or wind instruments as preparation for conducting school bands and orchestras.

MUSICAL ORGANIZATIONS

The University Choral Society.—(Two hours.) Open to all students. Required of all members of the Glee Clubs, voice majors, public school music students, and students in elementary education. The society is directed by the Instructor in Voice. A standard work is studied and presented each semester.

The Women's Glee Club.—(Two hours.) A selected number of women's voices is chosen from the student body. The club is under the direction of the Instructor in Voice. A secular and a sacred program consisting of choruses from the best composers are prepared each year. Likewise one operetta is also annually studied and presented.

The Men's Glee Club.—(Two hours.) The club is open to all men who can qualify. Standard male choruses and part-songs are prepared for public performance.

Quartettes, Trios, Etc.—Groups of students are selected from the Glee Clubs, rehearse quartettes, trios, etc., under the instruction of the voice teacher and furnish special music for assembly and chapel exercises.

Chapel Choirs.—Groups of mixed voices lead the singing of the chapel services and also render suitable anthems.

The University Orchestra.—(Two hours.) All students who play orchestral instruments may become members. The best standard orchestral compositions, including certain symphonies, are studied under the direction of the Instructor in Violin. The orchestra plays on many University programs. One full and two sectional rehearsals are held each week.

The Band.—(Two hours.) Membership is open to all students who play band instruments. The band is directed by the Instructor in Violin.

THE DEPARTMENT OF FOREIGN LANGUAGES AND LITERATURES

(French, German, Greek, Latin, Spanish)

FRENCH

A Major requires 24 hours and may be chosen from any courses except French 1 and 2. Students majoring in French are advised to elect courses in European History, and French Revolution and Napoleonic Era. A Minor in French consists of a minimum of 12 hours.

COURSES IN FRENCH

1. FIRST SEMESTER FRENCH—(A) Sem. 1. Cr. 3.
   Study of pronunciation by means of phonetic symbols. Grammar taught inductively, with much conversation and dictation; daily written work.
2. SECOND SEMESTER FRENCH—(A) Sem. 2. Cr. 3.
   Study of grammar, with emphasis upon the verb; reading of simple texts.
   Prerequisite: French 1, or 1 unit of high school French.
11. THIRD SEMESTER FRENCH—(A) Sem. 1. Cr. 3.
   Systematic review of grammar, with oral and written compositions. Study of irregular verbs. Reading of modern authors.
   Prerequisite: French 2 or 2 units of high school French.
12. FOURTH SEMESTER FRENCH—(A) Sem. 2, Cr. 3.
   Continuation of French 11.
   Prerequisite: French 11, or its equivalent.
51. SURVEY OF FRENCH LITERATURE—(B) Sem. 1. Cr. 3.
   Study of the origins of the French language and the development of literature with detailed study of seventeenth century literature. Rapid collateral assignments, reading in class of representative selections.
   Prerequisite: French 12, or its equivalent.
   Alternates with French 61.
   (Omitted 1928-29.)

52. SURVEY OF FRENCH LITERATURE—(B) Sem. 2. Cr. 3.
Study of eighteenth and nineteenth century literature.
Prerequisite: French 51, or its equivalent.
Alternates with French 62.
(Omitted 1928-29.)

61. NINETEENTH CENTURY LITERATURE—(B) Sem. 1. Cr. 3.
Study of various periods of nineteenth century literature, with rapid reading of representative novels, plays, and poetry.
Prerequisite: French 12, or its equivalent.
Alternates with French 51.

62. NINETEENTH CENTURY LITERATURE—(B) Sem. 2. Cr. 3.
Continuation of French 61.
Prerequisite: French 61.
Alternates with French 52.

63. COMPOSITION AND CONVERSATION—(B) Sem. 1. Cr. 2.
Written composition based on connected reading, with emphasis on the use of idioms. Conversation based on topics of current interest.
Prerequisite: French 12, or its equivalent.

64. COMPOSITION AND CONVERSATION—(B) Sem. 2. Cr. 2.
Continuation of French 63.
Prerequisite: French 63.

101. ADVANCED COMPOSITION AND CONVERSATION—(C) Sem. 1. Cr. 2.
Original oral and written compositions, and much practice in conversation.
Prerequisite: French 64.
(Omitted 1928-29.)

102. ADVANCED COMPOSITION AND CONVERSATION—(C) Sem. 1. Cr. 2.
Continuation of French 101.
Prerequisite: French 101.
(Omitted 1928-29.)

111. SEVENTEENTH CENTURY CLASSIC DRAMA—(C) Sem. 1. Cr. 3.
Study of the development of classic form in the plays of Corneille and Racine and of Moliere's art in depicting contemporary manners.
Prerequisite: Eighteen hours of French.
Alternates with French 161.

112. EIGHTEENTH CENTURY LITERATURE—(C) Sem. 2. Cr. 3.
Study of eighteenth century philosophy and literature.
Prerequisite: Eighteen hours of French.
Alternates with French 162.

161. FRENCH NOVEL OF NINETEENTH CENTURY—(D) Sem. 1. Cr. 3.
Courses of novel studied, and development traced by movements within century.
Prerequisite: Eighteen hours of French.
Alternates with French 111.
(Omitted 1928-29.)

162. MODERN FRENCH DRAMA—(D) Sem. 2. Cr. 3.
Plays of Becque, Bataille, Hervieu, Brieux, Rostand, Curel, etc.
Prerequisite: Eighteen hours of French.
Alternates with French 112.
(Omitted 1928-29.)

199. METHODS OF TEACHING FRENCH—(D) Sem. 1. Cr. 2.
Review of phonetic symbols to crystallize knowledge of pronunciation. Outlines of grammar are made and difficulties encountered in high school teaching are discussed. Methods studied and text-books, examined for high school use.
Prerequisite: Twelve hours of the major in French. Required of all who expect to teach French. May not be used for credit toward major or minor in French.

GERMAN

A major requires 24 credit hours, exclusive of credits received in course 199.

A minor requires 12 credit hours, exclusive of credits received in course 199.

Courses 41 and 81 are not required of students who wish to study German chiefly for its literature.

Students who are preparing to teach German are advised to take courses 41, 81, and 199.

COURSES IN GERMAN

1. FIRST SEMESTER GERMAN—(A) Sem. 1. Cr. 3.
Grammar, reading, and practice in writing and speaking German.

2. SECOND SEMESTER GERMAN—(A) Sem. 2. Cr. 3.
Continuation of German 1.
Courses 1 and 2 are designed primarily to give the student a thorough knowledge of the elements of German grammar, and to enable him to read easy German prose at sight and understand simple spoken German.
Prerequisite: German 1, or the equivalent.

11. THIRD SEMESTER GERMAN—(A) Sem. 1. Cr. 3.
Prerequisite: German 2, or the equivalent.

12. FOURTH SEMESTER GERMAN—(A) Sem. 2. Cr. 3.
Courses 11 and 12 are intermediate German courses, and include selected readings from modern prose writers and the classical poets, a review of German grammar, practice in writing and speaking German, and reports on outside reading.
Prerequisite: German 11, or the equivalent.

41. GERMAN COMPOSITION—(A) Sem. 1. Cr. 2.
Translations, review of grammar, written and oral reports on outside reading, letter writing.
Prerequisite: German 2, or the equivalent.

42. GERMAN COMPOSITION—(A) Sem. 2. Cr. 2.
Continuation of German 41.
Prerequisite: German 41, or the equivalent.

51. SCIENTIFIC GERMAN—(B) Sem. 1. Cr. 2.
For students who wish to prepare themselves to read scientific and technical German.
Prerequisite: German 12, or the equivalent.
Given in alternate years.
(Omitted 1928-29.)

61. GOETHE—(B) Sem. 1. Cr. 3.
See note under German 71.
Prerequisite: German 12, or the equivalent.

66. SCHILLER—(B) Sem. 2. Cr. 3.
See note under German 71.
Prerequisite: German 12, or the equivalent.

71. LESSING—(B) Sem. 2. Cr. 3.
German 61, 66, and 71 are introductory courses. The work of these courses includes the reading of works characteristic of the different periods of the authors' lives, also lectures and outside readings. The courses are conducted mainly in German.

81. ADVANCED GERMAN COMPOSITION—(B) Sem. 1. Cr. 2.
Translations, written and oral reports on outside reading, letter writing.
Prerequisite: German 42, or the equivalent.
Given in alternate years.
(Omitted 1928-29.)

82. ADVANCED GERMAN COMPOSITION—(B) Sem. 2. Cr. 2.
Continuation of German 81.
Prerequisite: German 81, or the equivalent.
Given in alternate years.
(Omitted 1928-29.)

111. HISTORY OF GERMAN LITERATURE, to 1800—(C) Sem. 1. Cr. 3.
Lectures, outside reading, and reports.
Prerequisite: German 61 and 66.
Given in alternate years.
(Omitted 1928-29.)

112. HISTORY OF GERMAN LITERATURE, since 1800—(C) Sem. 2. Cr. 3.
The purpose of courses 111 and 112 is to give the student a comprehensive view of the history of German literature. The lectures are both historical and critical in nature. The outside reading is chosen from representative products of the various periods, especially of those periods which are not represented in other parts of the German course.
Can not be counted towards a degree in addition to German 151 and 152.
Prerequisite: German 111.
Given in alternate years.
(Omitted 1928-29.)

151. NINETEENTH CENTURY LITERATURE—(D) Sem. 1. Cr. 3.
Class reading, lectures, and outside reading.
The authors especially studied in this course are Kleist, Uhland, and Heine. The lectures deal with the Romantic Movement, and the works

of Kleist, Uhland and the Swabian School, Young Germany, Heine, Eichendorff. The outside reading is taken from contemporary narrative and critical prose.

Prerequisite: Twelve hours of major in German.

152. NINETEENTH CENTURY LIERATURE—(D) Sem. 2. Cr. 3.

Continuation of German 151.

The classroom reading of this course is taken from the dramatic works of Grillparzer, Hebbel, Ludwig, Hauptmann, and Sudermann; the lectures deal mainly with the novel and the drama since the middle of the century; while the outside reading is taken from modern prose fiction.

Prerequisite: German 151.

181. GOETHE'S FAUST, Parts I and II—(D) Sem. 2. Cr. 3.

Class reading, lectures, and outside reading.

The major portion of this course is devoted to the interpretation of the two parts of the drama. The lectures deal with the history of the Faust legend before Goethe, and the development of Goethe's Faust from the Urfaust. The outside reading is chosen from dramas similar in nature to Goethe's drama.

Prerequisite: Twelve hours of major in German.

199. THE TEACHING OF GERMAN—(D) Sem. 1. Cr. 2.

Discussion of methods and materials; review of grammar; oral and written reports on outside readings.

May not be used for credit toward major or minor in German.

Prerequisite: Twelve hours of major in German.

Given in alternate years.

(Omitted 1928-29.)

LATIN

Course 1-2, or its equivalent, is prerequisite to all other courses except Latin 31; 24 hours constitute the requirements for a Major; 12 for a Minor. Students majoring in Latin are advised to include History 122 among their electives. Prospective teachers of Latin must include also Latin 199. Senior students will be admitted to B courses without loss of credit.

COURSES IN LATIN

1-2. BEGINNING LATIN. Year 2. Cr. 6.

This course is intended to acquaint the student with a language important for English and the other modern languages. It is meant to be helpful to the student who did not have the opportunity, or did not avail himself of the opportunity, to study Latin in the high school. Pronunciation, basic principles, and easy readings in Latin. Students who enter the University with one unit of high school Latin, not offered for credit, may take the course with full credit.

3-4. SECOND YEAR LATIN. Year. Cr. 6.

Continuation of Latin 2. The work will be varied to develop further understanding of Latin by means of diversified readings and compositions. Informal lectures on Roman life and institutions.

11. CICERO'S ORATIONS—(A) Sem. 1. Cr. 3.

Several of Cicero's political Speeches together with a selection of his Letters will be studied in class. This course offers the student not only additional Latin material of a different nature, but aims to present Cicero as a statesman and orator at a critical time in his career and in that of the Roman people. Easy Latin composition will accompany the work to assist review and to develop greater facility in understanding the language through mastery of forms and constructions.

Prerequisite: Latin 2 or two units of high school Latin.

12. VIRGIL'S AENEID—(A) Sem. 2. Cr. 3.

This course introduces the student to Latin poetry and to the greatest of Roman poets. The student will read the famous story of the Fall of Troy, Dido's tragic love, the Descent to Hades and what took place there. Study of Latin versification, continuation of suitable Latin composition, and the interpretation of Virgil as a poetic artist and as the mouthpiece of imperialistic Rome.

Prerequisite: Latin 11 or its equivalent.

51. LATIN PROSE COMPOSITION—(B) Sem. 2. Cr. 3.

Review and amplification of the principles of Latin grammar with practice in the writing of Latin. The course aims to assist the student in understanding Latin more readily by giving him a better knowledge of forms, constructons, and words.

Prerequisite: Latin 12, or its equivalent.

(Omitted 1928-29.)

53. CICERO'S DE SENECTUTE AND DE AMICITIA—(B) Sem. 1. Cr. 3.

The practical problems here discussed by Cicero are of perennial interest and show us the man who had absorbed the best elements of Greek and Roman civilization in his effort to arrive at a reasoned attitude on matters of ever-present human and social significance. The course aims to give the student a better understanding of Latin constructions and to interpret Cicero as a man of letters.

Prerequisite: Latin 12 or its equivalent.

56. OVID—(B) Sem. 1. Cr. 2.

Ovid ranks as the Roman poet of ease of manner, poetic versatility, and imaginative power. His poetry reflects the urbanity and polish of the proud and prosperous Age of Augustus. The course is based largely on Ovid's Metamorphoses with selections from his minor works.

Prerequisite: Latin 12, or its equivalent.

(Omitted 1928-29.)

61. LIVY—(B) Sem. 1. Cr. 3.

The course, introducing the student to Roman historical writing, aims to develop the power to read Latin more readily by strengthening the student's knowledge of Latin constructions and to bring before him Livy's graphic and dramatic skill in portraying historical events.

Prerequisite: Latin 12, or its equivalent.

(Omitted 1928-29.)

66. ROMAN COMEDY—(B) Sem. 2. Cr. 3.

History of the rise and decline of Roman comic drama. From the extant plays the Captivi of Plautus and the Phormio of Terence will be selected for class study with the reading of several other plays in English translation.

Prerequisite: Latin 12, or its equivalent.

72. VIRGIL'S ECLOGUES AND GEORGICS—(B) Sem. 2. Cr. 2.

These poems reveal the poet who reared an immortal monument in epic verse to the grandeur of imperial Rome in a lighter, but equally charming mood. Virgil has so skillfully caught the spirit of pastoral poetry and put in enduring verse his love for wheat and woodland, for hive and horse and herd that cultured thought has ever since turned to these Eclogues and Georgics with a lover's delight.

Prerequisite: Latin 61, or its equivalent.

(Omitted 1928-29.)

76. HORACE'S ODES AND EPODES—(B) Sem. 2. Cr. 2.

Horace represents in his lyric verse the very essence of the spirit of his age, the Golden Age of Latin Literature. Studied by the Roman school-boy in his own day and ever after the world over, Horace has become the best-known and most-quoted of Roman poets. Selections from the Odes and Epodes are studied in class, accompanied by the explanation of the meters used, with practice in the reading of the verse. The emphasis is on the literary interpretation of the poems with frequent illustrations from English literature.

Prerequisite: Latin 12, or its equivalent.

(Omitted 1928-29.)

81. PLINY'S LETTERS—(B) Sem. 1. Cr. 3.

Reading and interpretation of selected letters of the Younger Pliny, the contemporary and personal friend of the leading Roman historian, Tacitus. Study of the author and the character of his age.

Prerequisite: Latin 12, or its equivalent.

(Omitted 1928-29.)

101. CLASSICAL MYTHOLOGY—(C) Sem. 1. Cr. 2.

The course aims to present to the student in an organized form the various legends and myths of early Greece and Rome, which constitute the rich treasure-house of fancy, sentiment, and thought from which the world's poets and thinkers, painters and sculptors have drawn inspiration and heightened power. Lectures and textbook, with special reference to English literature. No knowledge of a foreign language necessary. Sophomores will be admitted to the course.

111-112. HORACE'S SATIRES AND EPISTLES—(C) Sem. 1 and 2. Cr. 2.

Horace is here revealed as a critic of literary and social life whose insight into men and their motives is tempered by good nature and judgment. The course aims to give a fuller background to Horace's life and times. The emphasis is on the elucidation of the thought. Either semester, or both semesters, may be taken

Prerequisite: Latin 12, or its equivalent.

121. SENECA'S EPISTLES—(C) Sem. 1. Cr. 2.

Reading and interpretation of the letters of a Roman statesman and man of letters who is as eminently representative of his times as Cicero is of an earlier century. Study of the leading ideas of Stoicism, a philosophy of life whose grave seriousness gave steadiness of purpose to the world before the dawn and dissemination of Christianity.

Prerequisite: Latin 61, or its equivalent.

131. SURVEY OF LATIN LITERATURE—(C) Sem. 2. Cr. 2.

The development of Latin Literature is traced throughout its course with emphasis on the representative writers in prose and verse. Greek influence on Roman thought. Study of Roman achievement in history, oratory, philosophy, satire, literary criticism, epos, epigram, lyric verse, etc., illustrated by selections from the leading authors in translation. Text, lectures, and reports.

Prerequisite: Latin 12, or its equivalent.

(Omitted 1928-29.)

161. ROMAN TRAGEDY—(D) Sem. 1. Cr. 3.

Several of the extant tragedies of Seneca studied and interpreted in class. History and development of Roman tragedy with a consideration of the causes of its decline and extinction. Influence of Seneca on the dramatic art of the moderns.

Prerequisite: Latin 61, or its equivalent.

(Omitted 1928-29.)

172. CICERO'S TUSCULAN DISPUTATIONS—(D) Sem. 2. Cr. 3.

An introduction to the study of Roman philosophy. Character of Roman philosophic thought and its relation to that of the Greek thinkers. The significance of Cicero for Roman philosophy.

(Omitted 1928-29.)

199. THE TEACHING OF LATIN—(D) Sem. 2. Cr. 2.

The principles of teaching applied to Latin together with a study of the subject-matter, texts, and organization of the high school course in Latin. Correlation with English; devices to stimulate interest, etc. The course includes practical work in teaching high school classes under competent supervision. Lectures and reports.

Prerequisite: 18 hours of Latin, including Latin 4.

(Omitted 1928-29.)

COURSES IN SPANISH

1. BEGINNING SPANISH—(A) Sem. 1. Cr. 3.

This course deals with the elements of Spanish grammar and aims primarily to give the student a reading knowledge of Spanish. Special attention is devoted to pronunciation, dictation, translation, and practice in speaking.

2. BEGINNING SPANISH. Sem. 2. Cr. 3.

Continuation of Spanish 1. The same textbook is used, the more difficult constructions are studied and easy Spanish authors are read in class.

Prerequisite: Spanish 1, or one unit of high school Spanish.

11-12. INTERMEDIATE SPANISH—(A) Sem. 1 and 2. Cr. 3.

Systematic review of grammar with exercises. Emphasis will be placed on the reading and appreciation of modern Spanish authors, with the further purpose of developing the student's vocabulary, his knowledge of Spanish idioms and the more difficult uses of the subjunctive.

Prerequisite: Spanish 2 or two units of high school Spanish.

51. BUSINESS SPANISH—(B) Sem. 2. Cr. 2.

Intensive reading of commercial Spanish and drill on the vocabulary and trade terms connected with commercial correspondence.

Prerequisite: Spanish 12, or its equivalent.

61-62. ADVANCED SPANISH READING COURSE—(B) Year. Cr. 2.

This course presupposes two full years of College Spanish, or its equivalent, and offers the student the opportunity to acquire a fuller knowledge of Spanish dramatic, lyric, and novelistic literature. Either, or both, semesters may be taken.

Prerequisite: Spanish 12, or its equivalent.

Additional courses in Spanish will be offered if there is demand for them.

COURSES IN GREEK

(Given upon sufficient demand.)

1-2. BEGINNING GREEK—(B) Yr. Each semester. Cr. 3.

The course is offered for those who have no opportunlty to study Greek in the high school and for those who wish to review the elements of the Greek language. The approach is by simple grammar and composition. The relation of English words to Greek is stressed, with informal lectures on the significance of ancient Greece to the modern world and its contributions to cultivated and scientific thought of today.

11-12. INTERMEDIATE GREEK—(B-C) Yr. Each semester. Cr. 3.

Review and amplification of Greek forms and constructions. Further study of the significance of Hellenic thought to modern civilization. The emphasis will be placed on the appreciation of the thought-content. Suitable texts will be used for Xenophon. Selections from Homer and Plato's Crito with assigned readings in translation.

Prerequisite: Greek 2 or its equivalent.

(Omitted in 1828-29.)

THE DEPARTMENT OF GEOLOGY

The two interrelated branches of earth science, Geology and Geography, deal with the natural phenomena of the earth, ancient and modern, its materials and native resources, its internal structure and external configuration, and the influence of physical environment upon the activities of man.

The field of study being the earth itself, Geology and Geography are recognized as being inherently out-of-door sciences. The region about Valparaiso is eminently suited for local field excursions in the study of physiographic and industrial phenomena. These include the Valparaiso moraine and continental divide, near the crest of which the city is located;

the present Lake Michigan and ancestral Lake Chicago beaches; the scenic Lake Michigan dunes, now in part made into a state park; and the industrial Calumet region, now ranking among the fastest growing industrial sections and one of the great steel centers in the United States.

The courses in this department may be elected by students having any of the following objectives in mind:

1. To fulfill teaching option requirements.
2. To acquire a general knowledge of the earth as part of their aesthetic, cultural, and civic training.
3. To supplement training in related fields of major and minor studies.
4. To provide professional training for teaching the earth sciences, or preparing for domestic or foreign trade service.

Students electing major or minor work in this department should arrange their program of studies with the aid of their adviser as early as possible. The usual sequence of courses is as follows: Geology 1, 2, 5, 7, 101, 105.

COURSES IN GEOLOGY

1. PHYSIOGRAPHY—(B) Sem. 1. 4+3, Cr. 5.

A general informational course in earth science, dealing primarily with the agencies and processes involved in the origin and modification of the surface features of the earth. Laboratory topographic map study interpretative of physiographic features. Field trips.

Laboratory fee $1.25.

2. GENERAL GEOLOGY—(B) Sem. 2. 2+3, Cr. 3.

A treatment of the fundamental principles of physiographical, stratigraphical, structural, and dynamical geology. Consideration of the theoretical phases, practical applications, and historical development of the science. Laboratory identification of the more common minerals, rocks, and fossils; construction of profile and structure sections; interpretation of topographic maps and geologic folios. Collateral readings. Field Trips.

Prerequisite: Geology 1.

Laboratory fee $1.25.

5. ECONOMIC GEOGRAPHY—(B) Sem. 2. 3+0, Cr. 3.

A study of the adaptations of agricultural, industrial, and commercial activities of man to earth environment. Visit to Chicago industrial establishments.

Prerequisite: Geology 1, or registration in the Department of Economics.

Laboratory fee $1.00.

7. WORLD GEOGRAPHY—(B) Sem. 1. 3+0, Cr. 3.

A course in the principles of human geography.

Prerequisite: Geology 1.

10. ENGINEERING GEOLOGY—(B) Sem. 1. 3+3, Cr. 4.

A presentation of the principles of geology, featuring elements applying to the problems and practices of the engineer. "Elements of Engineering Geology" by Ries and Watson furnishes the basis for the work of the

course, treated under the following heads: "The important rock-making minerals; rocks and their relations to engineering work; structural features and metamorphism; rock-weathering and soils; development, work, and control of rivers; underground water; landslides, land subsidence and their effects; relation of wave action and shore currents to coasts and harbors; origin and relation of lakes and swamps to engineering work; origin, structure, and economic importance of glacial deposits; road foundations and road materials; ore deposits." Class, laboratory, and field studies.

Laboratory fee $1.00

21. CRYSTALLOGRAPHY AND MINERALOGY—(B) Sem. 2, 2+3, Cr. 3.
An introduction to the principles and concepts of crystallography, supplemented by a study of the elements of mineralogy. Laboratory examination of crystal models and natural crystals, blowpipe analysis, and identification of the more common minerals of economic and scientific importance.
Prerequisite: Geology 2, or Chemistry 53.
Laboratory fee $3.00.

101. GEOGRAPHY OF NORTH AMERICA—(C) Sem. 2. 3+0, Cr. 3.
A regional treatment of the environmental factors which control or influence human developments on the North American continent.
Prerequisite: Geology 5.
(Omitted 1928-1929.)

105. GEOGRAPHY OF SOUTH AMERICA—(C) Sem. 2, 3+0, Cr. 3.
A regional treatment of the environmental factors which control or influence human developments on the South American continent. Foreign trade.
Prerequisite: Geology 5.
(Omitted 1928-1929.)

THE DEPARTMENT OF HOME ECONOMICS

The courses of instruction given in this Department are planned to meet the needs of the following groups: (a) Students who wish to prepare themselves for home making. (b) Students who wish to prepare themselves for teaching Home Economics in secondary and vocational schools. (c) Students who wish to prepare themselves for institutional management or other administrative work, and for commercial pursuits.

The Department offers the following:

I. A four-year general curriculum leading to the degree of Bachelor of Arts, planned for students who wish training in the principles of home making together with a general cultural education. Although students in this curriculum must meet the requirement for a major in Home Economics, the liberal proportion of electives permits the taking of courses in any department in the college in which the student is interested, subject, of course, to a proper balancing of the work, according to an approved program.

II. A four-year professional curriculum leading to the degree of Bachelor of Arts, including technical courses, together with basic arts and sciences, languages,

economics, and sociology for those desiring training not only for home making, but also for teaching Home Economics and for such vocations as institutional management, social service, and educational extension work. The studies of the first two years are prescribed and give the necessary foundation for any of these occupations. During the junior and senior years specialization within limits is possible.

III. A four-year curriculum in home management.

Note: All students in Home Economics must take the required freshman constant.

I. GENERAL CURRICULUM IN HOME ECONOMICS

Sophomore Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
	Sophomore constant	6		Sophomore constant	6
Chem. 71.	Household Chemistry	4	H. E. 61.	Elementary Clothing	3
H. E. 51.	Art and Design	3	H. E. 52.	Elementary Textiles	2
	Elective	3	H. E. 71.	Introduction to Home Economics	1
				Elective	4
		16			16

Junior Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
H. E. 121.	Clothing Construction	3	H. E. 125.	Millinery	2
H. E. 131.	Principles of Cookery	3	H. E. 132.	Home Cookery and Table Service	3
H. E. 136.	Sanitation	2	H. E. 137.	Hygiene	2
H. E. 138.	Woman and Her Social Relations	1	H. E. 141.	The House	3
	Elective	7	Zool. 20.	Elementary Physiology	3
				Elective	3
		16			16

Senior Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
H. E. 151.	History of Costume Design	2	H. E. 135.	Home Nursing	2
H. E. 176.	Household Administration	2	H. E. 155.	Dressmaking	3
H. E. 191.	Elementary Nutrition	4	H. E. 198.	Child Care	2
Bot. 125.	Bacteriology	4	Phys. 115.	Household Physics	4
	Elective	4		Elective	5
		16			16

Electives should be chosen from Fine Arts, English Literature, History, Sociology, or Music.

II. PROFESSIONAL CURRICULUM IN HOME ECONOMICS

Sophomore Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
	Sophomore Constant.....	6		Sophomore Constant.....	6
Chem. 51.	General Chemistry.....	4	Chem. 53.	Inorganic Chemistry.....	4
H. E. 51.	Art and Design.....	3	H. E. 61.	Elementary Clothing.....	3
Psych. 51.	General Psychology.....	3	Psych. 52.	Educational Psychology.	3
		16			16

Junior Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
H. E. 121	Clothing Construction.....	3	H. E. 132.	Home Cookery and Table Service	3
H. E. 131.	Principles of Cookery....	3	H. E. 137.	Hygiene	2
H. E. 136.	Sanitation	2	H. E. 141.	The House	3
H. E. 138.	Woman and Her Social Relations	1	Ed. 119.	Secondary Education.....	3
Ed. 113.	General History of Education	3	Chem. 108.	Household Chemistry...	2
Chem. 103.	Organic Chemistry.....	4	Zool. 20.	Elementary Physiology.	3
		16			16

Senior Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
H. E. 161.	Methods of Teaching Home Economics.....	3	H. E. 135.	Home Nursing	2
H. E. 176.	Household Administration	2	H. E. 155.	Dressmaking	3
H. E. 191.	Elementary Nutrition....	4	H. E. 177.	Household Administration	2
Ed. 151.	Principles of Teaching...	3	H. E. 198.	Child Care	2
Bot. 125.	Bacteriology	4	Ed. 191.	Supervised Teaching.....	3
				Elective	4
		16			16

III. CURRICULUM IN HOME MANAGEMENT

Sophomore Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
	Sophomore Constant.....	6		Sophomore Constant....	6
Chem. 71.	Household Chemistry.....	4	H. E. 52.	Elementary Textiles.....	2
H. E. 51.	Art and Design.....	3	H. E. 61.	Elementary Clothing....	3
	Elective	3		Elective	5
		16			16

Junior Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
H. E. 121.	Clothing Construction....	3	H. E. 125.	Millinery	2
H. E. 131.	Principles of Cookery....	3	H. E. 132.	Home Cookery and Table Service	3
H. E. 136.	Sanitation	2	H. E. 137.	Hygiene	2
H. E. 138.	Woman and Her Social Relations	1	H. E. 141.	The House	3
	Elective	7	H. E. 142.	Hygiene of Home Making	1
			Zool. 20.	Elementary Physiology.	3
				Elective	2
		16			16

Senior Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
H. E. 151.	History of Costume Design	2	H. E. 135.	Home Nursing	2
H. E. 176.	Household Administration	2	H. E. 155.	Dressmaking	3
H. E. 191.	Elementary Nutrition.....	4	H. E. 198.	Child Care	2
Bot. 125.	Bacteriology	4	Phys. 115.	Household Physics.....	4
	Elective	4		Elective	5
		16			16

Electives should be chosen from Fine Arts, English Literature, History, Sociology, or Music.

COURSES IN HOME ECONOMICS

Students are requested to wear a plain white dress or large white apron of the Hoover type for foods and cookery laboratories.

Foods and Nutrition

71. INTRODUCTION TO HOME ECONOMICS—(B) Sem. 2, cr. 1.
A course for beginning students. Deals with the history, purpose, value, and scope of Home Economics.

131. PRINCIPLES OF COOKERY—(C) Sem. 1, 1+4, cr. 3.
A study of the methods of preparation of the types of food most commonly used in the home and in the teaching of elementary cookery. The meal of the average family is chosen as the unit of study, cost and nutritive value being emphasized. This course is fundamental for all teachers of cookery.
Prerequisite: Chemistry 51.
Laboratory fee $7.50.

132. HOME COOKERY AND TABLE SERVICE—(C) Sem. 2, 1+6, cr. 3.
A study of the application of the general principles of cookery to the preparation of menus and meals for the home. It also includes the

study and execution of different forms of table service as applied to different types of meals and occasions.

Prerequisite: Chemistry 53 and Home Economics 131.

Laboratory fee $7.50.

171. DEMONSTRATION COOKERY—(D) 0+2, cr. 1.

This course aims to give students practice in cookery demonstrations which are suitable not only for class teaching, but for extension work with women, boys' and girls' club work.

(Given upon sufficient demand.)

Prerequisite: Home Economics 131 and 132.

Laboratory fee $3.00.

172. EXPERIMENTAL COOKERY—(D) 0+4, cr. 2.

This course affords an opportunity for the investigation of problems in the field of cookery, such as experimentation with proportions; methods of combining ingredients; temperatures for cooking processes; relation of time and temperature; variation of recipes.

(Given upon sufficient demand.)

Prerequisite: Home Economics 131 and 132.

Laboratory fee $5.00.

181. INVALID COOKERY—(D) 0+4, cr. 2.

The purpose of this course is to give students an opportunity for applying the principles and methods of cookery to the preparation of food and of trays for the sick and convalescent as an introduction to the ordinary home and hospital diet.

(Given upon sufficient demand.)

Prerequisite: Home Economics 131, 132, and 191.

Laboratory fee $5.00.

182. DIET IN DISEASE—(D) cr. 2.

This course treats of the adaptation of diet to disorders of nutrition and the study, planning, and preparation of diets in their relation to nutrition, as modified by pathological conditions.

(Given upon sufficient demand.)

Prerequisite: Home Economics 181 and 191.

Laboratory fee $5.00.

183. LARGE QUANTITY COOKERY—(D)— 0+9, cr. 3.

This course is designed to give practice in handling large quantities of food for small and large institutions, such as elementary and high schools, college dormitories, industrial plants, or tea rooms. The course will include some practice in planning and serving luncheons of varying costs to small groups, also some practice in the college dining room.

(Given upon sufficient demand.)

Prerequisite: Home Economics 131, 132, and 191.

Laboratory fee $7.50.

191. ELEMENTARY NUTRITION—(D) Sem. 1. 1+6, cr. 4.

A study of the requirements of the individual throughout infancy, childhood, adult life, and old age, in the light of the chemistry and physi-

ology of digestion, the energy value of foods, the properties of minerals and vitamins. Typical dietaries are planned for each period.

Prerequisite: Chemistry 103, Zoology 20, Home Economics 131.

Laboratory fee $5.00.

192. ADVANCED NUTRITION—(D) cr. 2.

A study of nutritional disorders; their causes and correction. (Given upon sufficient demand.)

Prerequisite: Home Economics 191.

Clothing and Textiles

51. ART AND DESIGN—(B) Sem. 1. 0+4, cr. 3.

A study of the principles of design and theory of color with their application to various decorative craft processes; the selection, adaptation, preparation, and application of good designs in relation to everyday living.

Laboratory fee $3.00.

52. ELEMENTARY TEXTILES—(B) Sem. 2. 0+4, cr. 2.

A study of the production and manufacture of textile fibers, including the economic conditions involved; physical and microscopic tests of the fibers; identifications, uses, and description of standard fabrics.

Laboratory fee $2.00.

61. ELEMENTARY CLOTHING—(B) Sem. 2. 0+6, cr. 3.

Fundamental principles of clothing construction and selection with particular reference to cotton fabrics; study of commercial patterns; care and use of sewing machines; hygiene, care, and repair of clothing.

Prerequisite: Home Economics 51.

Laboratory fee $2.00.

121. CLOTHING CONSTRUCTION—(C) Sem. 1. 0+6, cr. 3.

Continuation of Home Economics 61, with further work in the construction of plain clothing; personal expense accounts and budget-making with special reference to clothing.

Prerequisite: Home Economics 61.

Laboratory fee $2.00.

125. MILLINERY—(C) Sem. 2. 0+4, cr. 2.

Artistic and economic principles underlying the selection, practical care, and renovation of hats. Fundamental millinery processes; making of patterns, shapes, and covering of frames with various kinds of materials; art of making hand trimming.

Prerequisite: Home Economics 51.

Laboratory fee $2.00.

141. THE HOUSE—(C) Sem. 2. 1+4, cr. 3.

A study of the development, influences, and wise selection of a home with special reference to fundamental problems of construction and arrangement, and intelligent choice and use of suitable furnishings.

Prerequisite: Home Economics 51.

Laboratory fee $2.00.

151. HISTORY OF COSTUME AND COSTUME DESIGN—(D) 0+6, cr. 2.

Survey of historic costume and its effect upon modern dress; applica-

tion of design principles and color theory to the task of selecting and designing costumes.

Prerequisite: Home Economics 51.

Laboratory fee $2.00.

152. ADVANCED TEXTILES—(D) 0+4, cr. 2.

Chemical tests for the differentiation of fibers; tests for the adulterants of fabrics; application of dyestuffs; the removal of stains.

(Given upon sufficient demand.)

Prerequisite: Chemistry 51 and Home Economics 121.

Laboratory fee $2.00.

155. DRESSMAKING—(D) Sem. 2. 0+6, cr. 3.

Design and construction of tailored wool problems and silk afternoon dress; emphasis is placed upon choice of appropriate lines, materials, and colors for individuals.

Prerequisite: Home Economics 121.

Laboratory fee $2.00.

Nursing and Health

135. HOME NURSING—(C) Sem. 2. 2+0, cr. 2.

The course deals with the prevention and cure of sickness in the home. It discusses such topics as proper surroundings for the sick, the early recognition of the common symptoms of disease, and simple nursing procedures and first aid treatment for common household emergencies.

Prerequisite: Zoology 22.

Laboratory fee $1.00.

136. SANITATION—(C) Sem. 1, cr. 2.

This course includes a general survey of the fundamental principles of sanitary science and disease prevention and their application to water supply, milk and general food supply, disposal of sewage and garbage, air supply, the problem of house, tenement, and factory sanitation, and the spread and control of infectious diseases. Brief attention will also be given to the problems of rural hygiene, the preventive factors in constitutional disease, personal hygiene, and social and economic aspects of health problems. The functions and methods of boards of health and the use of vital and sanitary statistics will be discussed.

Prerequisite: Botany 125.

137. HYGIENE—(C) Sem. 2, cr. 2.

The theories of preventive medicine; vaccinations and immunity; air, water, foods, insects as carriers of disease; pollution and purification of water supplies, sewage disposal; epidemics, isolation and quarantine, disinfection; school, industrial, social, personal, and mental hygiene.

138. WOMAN AND HER SOCIAL RELATIONS—(C) Sem. 1, cr. 1.

A study of woman in her relations to the various activities of the community, social, economic, hygienic, civic, and educational.

142. HYGIENE OF HOMEMAKING—(C) Sem. 2, cr. 1.

Lectures and conferences on the health and hygiene of marriage and the family.

161. METHODS OF TEACHING HOME ECONOMICS—(D) Sem. 1, cr. 3.
This includes a study of the development of home economics and its relation to other subjects in the school curriculum; methods of presentation of subject matter, discussions and practice in organization and correlation of courses, uses of illustrative material in teaching, lesson plans, observations in public schools, and study of text-books, supplies and equipment.

176. HOUSEHOLD ADMINISTRATION: MANAGEMENT—(D) Sem. 1. 1+4, cr. 2.
A study of the budget and expenditure in the typical home. The hygienic and social problems of the home. Laundering and cleaning fabrics, renovation and renewal of furniture and furnishings, use of cleaning supplies and appliances.

177. HOUSEHOLD ADMINISTRATION: PRACTICE HOUSE—(D) Sem. 2, cr. 2.
A course dealing with the problems of the homemaker. Students live in the practice house for six weeks and put into practice the training received in all other Home Economics or related courses.
Time arranged.

198. CHILD CARE—(D) Sem. 2, cr. 2.
The health problems of mother and infant; feeding of normal infants and children, diet in deficiency diseases, growth and development in childhood and adolescence.

Courses in Institutional Management

183. QUANTITY COOKERY—(D) 1+6, cr. 3.
This course is designed to give practice in handling large quantities of food for small and large institutions, such as elementary and high schools, college dormitories, industrial plants or tea rooms. The course will include some practice in planning and serving luncheons of varying costs to small groups, and in practice in the college dining room.
(Given upon sufficient demand.)
Prerequisite: Home Economics 131, 132, and 191.
Laboratory fee $7.50.

184. INSTITUTIONAL ORGANIZATION AND ADMINISTRATION—(D) cr. 3.
Principles and methods of organization and administration, division of labor, standards and costs of food service, equipment, keeping of records, and office management. Class and field trips each week.
(Given upon sufficient demand.)

185. INSTITUTIONAL MARKETING—(D) Cr. 2.
Economics of marketing, principles of wholesale buying for institutions, storage and care of foods.
(Given upon sufficient demand.)

186. INSTITUTIONAL MANAGEMENT PRACTICE—(D) 1+9, cr. 4.
Practice work in office of dietitians, including bill checking, filing inventories, record keeping, experience in preparation and service for special functions and in various positions in dormitories, dining room, etc.
(Given upon sufficient demand.)

THE DEPARTMENT OF MATHEMATICS AND PHYSICS

A—MATHEMATICS

Prerequisite: Mathematics 51 and 60.

Twenty-four credits, including Mathematics 51 and 60, are required for a major. Twelve credits make a minor.

Students intending to do graduate work are advised to work for 48 credits in mathematics.

Students who are deficient in entrance algebra should take suitable courses from the following pre-college courses: 01, 02, 03 and 04.

COURSES IN MATHEMATICS

01. ELEMENTARY ALGEBRA—Cr. 0.
For students who are deficient in entrance algebra.

02. INTERMEDIATE ALGEBRA—Cr. 0.
For students who have presented but one unit of algebra for entrance.

03. PLANE GEOMETRY—Cr. 0.
For students who are deficient in entrance geometry.

04. SOLID GEOMETRY—Cr. 0.
For students who have presented but one unit of geometry for entrance.

51. TRIGONOMETRY—(B) Each sem., cr. 3.
Plane and spherical trigonometry. Special attention is given to the numerical solution of triangles.
Prerequisite: Mathematics 04.

60. COLLEGE ALGEBRA—(B) Each sem., cr. 2.
Quadratic equations, use of determinants, progressions, binomial theorem, numerical solutions of equations by Horner's method.
Prerequisite: One and one-half unit high school algebra.

70. ANALYTICAL GEOMETRY—(C) Sem. 2, cr. 5.
The straight line, circle, conic sections; some of the surfaces in three-dimensional space.
Prerequisite: Mathematics 51 and 60.

80. DIFFERENTIAL CALCULUS—(C) Sem. 1, cr. 5.
The subject is introduced with applications to geometrical and physical problems.
Prerequisite: Mathematics 70.

110. MATHEMATICS OF FINANCE—(C) Sem. 2, cr. 3.
For students in Business Administration. A study of interest, discount, loans, insurance, investments, stocks, bonds, annuities, etc.
Prerequisite: Mathematics 60.

120. INTEGRAL CALCULUS—(C) Sem. 2, cr. 5.
Practice in integration, definite integrals, improper integrals, multiple integration; geometical and mechanical applications; some of the most important theorems of integral calculus.
Prerequisite: Mathematics 80.

130. ADVANCED ALGEBRA—(C) Sem. 1, cr. 3.
Undetermined coefficients, continuous fractions with some of their applications, various methods of summing series, finite differences.
Prerequisite: Mathematics 60 and consent of the instructor.
(Alternates with Mathematics 160.)

151. NON-EUCLIDEAN GEOMETRY—(D) Sem. 1, cr. 3.
An axiomatic treatment is given of the hyperbolic and elliptic geometries; some of the analytical theory is developed.
Prerequisite: Mathematics 70 and consent of the instructor.
(Alternates with Mathematics 155.)

155. MODERN ANALYTICAL GEOMETRY—(D) Sem. 1, cr. 3.
A brief introduction to synthetic projective geometry is followed by an analytic exposition of the more essential parts of projective geometry.
Prerequisite: Mathematics 70 and consent of the instructor.
(Alternates with Mathematics 151.)

160. ADVANCED CALCULUS—(D) Sem. 1, cr. 3.
A rigorous proof of the more advanced theorems of calculus is given.
Prerequisite: Mathematics 80.
(Alternates with Mathematics 130.)

165. THEORY OF ALGEBRAIC EQUATIONS—(D) Sem. 2, cr. 2.
The essentials of the general theory are presented with methods of solution.
Prerequisite: Mathematics 130.
(Alternates with Mathematics 180.)

170. DIFFERENTIAL EQUATIONS—(D) Sem. 1, cr. 3.
Ordinary differential equations; applications to physical problems.
Prerequisite: Mathematics 120.

175. DIFFERENTIAL EQUATIONS—(D) Sem. 2, cr. 3.
Non-linear differential equations, partial differential equations; some of the existence theorems.
Prerequisite: Mathematics 170.

180. THEORY OF INFINITE SERIES—(D) Sem. 2, cr. 2.
Theory of convergence; legitimacy of operating with infinite series considered in connection with problems in calculus and differential equations.
Prerequisite: Mathematics 170.
(Alternates with Mathematics 165.)

191. THE TEACHING OF MATHEMATICS—(D) Cr. 3.
The methods and materials; principles of the mathematical science, in particular, of geometry and algebra.
Prerequisite: Fifteen hours of mathematics.

B—PHYSICS

The courses are arranged to meet the need of (1) students desiring to major or minor in Physics, (2) students preparing for Medicine, and (3) students in Engineering and Home Economics.

Twenty-four sequential credits in Physics shall constitute a major.

Twelve credits in Mathematics and one other science, Chemistry or Engineering, are required for the related minor.

The minor in Physics should be arranged upon consultation with the major adviser.

COURSES IN PHYSICS

51-52. GENERAL PHYSICS—(B) Yr. Each sem. 3+3, cr. 4.
This is the basic course in physics.
Prerequisite: High School Algebra.
Laboratory fee $6,00; *deposit* $2.00.

61-62. TECHNICAL PHYSICS—(B) Yr. Each sem. 3+3, cr. 4.
This course is intended particularly for engineers.
Prerequisite: Mathematics 51.
Laboratory fee $6,00; *deposit* $2.00.

101. TEACHING OF PHYSICS—(C) Sem. 2, cr. 2.
Open to students in Physics, Botany, Zoology, and Education.
Prerequisite: Physics 51 and 52 or 61 and 62 and one other course.
(Omitted 1928-1929.)

105. DESCRIPTIVE ASTRONOMY—(C) Sem. 1, cr. 3.
Designed for those wishing a general knowledge of the principal facts, theories, and methods of astronomy.
Prerequisite: Mathematics 51.

110. THEORY OF HEAT—(C) Sem. 1, cr. 5.
Thermal properties of matter, energy transformation, properties of vapors, refrigeration, combustion, and pyrometry are studied.
Prerequisite: Mathematics 80 and Physics 51 and 52. Open to those who are taking technical physics.

111. THEORY OF HEAT LABORATORY—(C) Sem. 1, cr. 1.
This course is designed to accompany Physics 110. Experiments are chosen from the text used in Physics 110. Also open to Engineering students.
Laboratory fee $6.00; *deposit* $2.00.

115. HOUSEHOLD PHYSICS—(C) Sem. 2. 3+3, cr. 4.
This course is intended primarily for students in Home Economics.
Prerequisite: High school algebra.
(Given upon sufficient demand.)
Laboratory fee $6.00; *deposit* $2.00.

120. WAVE THEORY OF LIGHT—(C) Sem. 2, cr. 5.
A course intended to give a systematic and complete treatment of the subject.
Prerequisite: Mathematics 51 and Physics 51 and 52.

121. LIGHT LABORATORY—(C) Sem. 2, cr. 2.
A course intended to accompany Physics 120. The student is familiarized with the use of the spectroscope and its application in spectrum analysis.
Prerequisite: Mathematics 51.
(Omitted 1928-1929.)
Laboratory fee $6.00; *deposit* $2.00.

125. ELECTRICAL MEASUREMENTS—(C) Sem. 1, 1+6, cr. 3.
Required of juniors who are taking Electrical Engineering. Also especially adapted to accompany course 180, though not required.
Prerequisite: Mathematics and Physics 51 and 52 or 61 and 62.

150. HISTORY OF PHYSICS—(C) Sem. 2, cr. 2.
A complete survey of the development of Physics.

151. MODERN PHYSICS—(D) Sem. 1, cr. 3.
A course dealing with recent discoveries in the nature of matter and energy, embodying also recent theories of atomic structure, X-rays, radioactivity, and other modern phenomena.
Prerequisite: Physics 51 and 52 or 61 and 62.
(Omitted 1928-29.)

175. ALTERNATING CURRENT THEORY—(D) Sem. 1, cr. 3.
This course must be taken by those who plan to study Radio.
Prerequisite: Mathematics 80 and Physics 51 and 52 or 61 and 62.

176. RADIO—(D) Sem. 2, cr. 3.
A study of elecromagnetic waves and the theory of radio communication.
Prerequisite: Physics 175.

177. RADIO LABORATORY—(D) Sem. 2, 0+3, cr. 1.
Designed to accompany Physics 176. The study and construction of radios.
Laboratory fee $6.00; *deposit* $2.00.

180. ELECTRICITY AND MAGNETISM—(D) Sem. 1, cr. 3.
The elements of the mathematical theory of electricity and magnetism and the general theory of instruments are considered.
Prerequisite: Physics 51 and 52 or 61 and 62 and Mathematics 80.

THE DEPARTMENT OF RELIGION

The courses to be given in this department will prepare the student for general lay leadership, or for such and similar specific lay positions as that of church or institutional secretary. The courses and curricula are being prepared and will be announced in the next edition.

THE DEPARTMENT OF SOCIAL SCIENCE

The courses in Economics, History, Political Science, and Sociology aim to give the student an insight into the record of the development of social, economic, and political institutions, thereby giving him the background necessary to an intelligent citizenship, further professional training, and a liberal education.

The Department of Social Science is sponsor for the following work:

1. For the TWO-YEAR PRE-LEGAL COURSE. For this course the freshman and sophomore constants and, in the sophomore year, such courses as may be suggested by the adviser on the basis of the student's previous training and natural aptitude are required.

2. For the FOUR-YEAR LIBERAL ARTS-LAW PROGRAM. For this program the freshman and sophomore constants, a major in History and Political Science, and sufficient electives to total at least 90 credits at the end of the junior year are needed.

   This is followed by one year of Law.

3. For the first half of the SIX-YEAR COMBINED LIBERAL ARTS-LAW PROGRAM. This program requires for its completion the three years of work in the College of Liberal Arts, noted above, and the regular three-year course in the School of Law.

4. For the FIVE-YEAR COMBINED LIBERAL ARTS AND SOCIAL WORK PROGRAM. For this program the freshman and sophomore constants, a major in the social studies, including Sociology 51, 52, 101, and 102; History 51, 52, 131, 132, 133, and 134; Political Science 51, 52, and 101; Economics 51, 52, and 142; Psychology 51, 52, and 116, and sufficient electives to total 124 credits must be earned.

ECONOMICS

Economics 51 and 52, the prerequisites for all advanced courses, and at least one of the following are required in preparation for a major: Political Science 51 and 52; History 51 and 52.

Eighteen credits of upper-division courses, above 100, including Economics 51 and 52, or a total of 24, are required for a major.

Twelve credits, chosen from one or two related departments, History, Political Science or Sociology, are needed for the supporting minor.

COURSES IN ECONOMICS

51. PRINCIPLES OF ECONOMICS—(B) Sem. 1, cr. 3.

    This is a basic course designed to acquaint the student with fundamental economic concepts. The processes of production, exchange, distribution, and consumption of wealth are analyzed, and their relation to current economic problems discussed. Credit withheld until Economics 52 is successfully completed.

    Prerequisite: Sophomore standing.

52. PRINCIPLES OF ECONOMICS—(B) Sem. 2, cr. 3.

    Continuation of Economics 51.

    Prerequisite: Economics 51.

101. ECONOMIC HISTORY OF THE UNITED STATES—(C) Sem. 1, cr. 3.

    The origin and development of modern American economic institutions and life.

    Prerequisite: Economics 52.

142. LABOR PROBLEMS—(C) Sem. 1, cr. 3.

    This is a survey course dealing with (1) the history of labor and the main forces underlying our modern labor problems, (2) the approach of workers and employers to their labor problems, (3) the development of trade unions and other institutions, and (4) social control.

    Prerequisite: Economics 52.

151. MONEY AND BANKING—(D) Sem. 2, cr. 3.

The following topics are considered: the importance and the principles of sound money; the gold standard; centralized banking; the national banking system; theory of averting panics and crises under the Federal Reserve System.

Prerequisite: Economics 52.

162. INVESTMENTS—(D) Sem. 2, cr. 3.

This course undertakes an analysis of the general principles of investment; classification of securities; investment opportunities; mathematics of yields and conversions; methods of protection; sources of information; general work of the bond house.

Prerequisite: Economics 52.

171. TRANSPORTATION—(B) Sem. 1, cr. 3.

The development of the American railroad system; the branches of the railroad service; classification and rates; public aid and regulation in the United States and foreign countries.

Prerequisite: Economics 52.

172. FOREIGN TRADE—(D) Sem. 2, cr. 3.

A general survey course in which the study of marketing is carried over into the foreign field. It will cover the character and volume of the foreign trade of the United States, and present tendencies in that trade; direct and indirect contracts with the foreign market; foreign exchange and credits; ocean transportation; tariffs and national commercial policies.

Prerequisite: B. M. 121 and Economics 52.

HISTORY

On the completion of History 51 and 52, upper division courses may be chosen.

Upper-division students majoring in other departments may, with the consent of the adviser in Social Science, be allowed to register for upper-division courses without the introductory courses.

A major in History requires at least 24 units in History, which should include History 51 and 52 and other courses grouped in either American or European History. Economics 51 and 52 are also required.

COURSES IN HISTORY

51-52. WORLD HISTORY—(B) Yr. Each sem., cr. 3.

This course is intended normally for beginners in History. Being very general in its nature, it attempts to give merely a general survey of the progress of mankind from the dawn of history to the present time.

101. MEDIEVAL EUROPE—(C) Sem. 1, cr. 3.

A survey of European history from the dissolution of the Roman empire to the rise of modern national states, about 500 to 1500, with primary emphasis upon the peculiarly medieval institutions.

102. MODERN EUROPE—(C) Sem., 2, cr. 3.

Continuation of History 101. The development of Europe from the beginning of the sixteenth century to the present time, with particular

attention to those economic and intellectual forces that have entered so vitally into the making of twentieth century Europe.

Prerequisite: History 101.

103. RENAISSANCE AND REFORMATION—(C) Sem. 2, cr. 3.

A study of the transition of Europe from medieval to modern times: the revival and spread of classical learning, humanism, fine arts and letters, scientific inventions and discoveries, geographical explorations, the Protestant Reformation, the Catholic Counter-Reformation, and the religious wars to 1648.

Alternates with History 113.

(Omitted 1928-29.)

104. FRENCH REVOLUTION AND NAPOLEONIC ERA—(C) Sem. 1, cr. 3.

Growing dissatisfaction under the old regime, the meeting of the Estates-General, the constitutional monarchy, the republic under the Terror and the Directorate, the rise of Napoleon and the Consulate, the Empire and Napoleonic wars, and the Congress of Vienna. Less emphasis is placed upon the purely personal and local phenomena and more upon the significance of the period for the subsequent development of Europe.

Alternates with History 121.

(Omitted 1928-29.)

111. ENGLAND THROUGH THE ELIZABETHAN ERA—(C) Sem. 1, cr. 3.

A study of the growth of the English nation from the earliest times to the end of Elizabeth's reign (1603), with constant reference to the contemporary history of continental Europe.

112. ENGLAND SINCE JAMES I—(C) Sem. 2, cr. 3.

Continuation of History 111. A century of revolution, aristocratic government, foundations of the British Empire, the economic revolution, the period of reform, the growth of democracy, the World War, and recent tendencies.

Prerequisite: History 111.

113. CONSTITUTIONAL HISTORY OF ENGLAND—(C) Sem. 2, cr. 3.

Alternates with History 103.

121. ANCIENT HISTORY—(C) Sem. 1, cr. 3.

The Orient and Greece. Prehistoric times, Egypt, the civilizations of the Tigris-Euphrates valley, the Hebrews, the Phoenicians, and the Hellenic world.

Alternates with History 104.

122. ANCIENT HISTORY—(C) Sem. 2, cr. 3.

The Roman world, from the beginning of Rome to the so-called "fall" of the western empire in 476.

Alternates with History 151.

131. UNITED STATES TO 1829—(C) Sem. 1, cr. 3.

Deals with the period from the earliest settlements to the administration of Andrew Jackson.

132. UNITED STATES: 1829 TO THE PRESENT TIME—(C) Sem. 2, cr. 3.

Prerequisite: History 131.

133. THE U. S. AS A WORLD POWER—(C) Sem. 1, cr. 3.
1898 to present time. Results of Spanish War. Political development. European War. American participation. Results of World War. League of Nations.
Prerequisite: History 131 and 132.

134. GROWTH OF THE WEST—(C) Sem. 2, cr. 3.
The settlement and growth of the various areas west of the Appalachians, and the influence of the new states upon national and international affairs.

151. THE GERMAN EMPIRE—(D) Sem. 2, cr. 3.
The background of the Empire in late medieval and early modern European history, Bismarck and the unification of Germany, William II, political, social, and economic development of Germany to 1914, the World War and fall of the Hohenzollerns.
Alternates with History 122.
(Omitted 1928-29.)

199. THE TEACHING OF HISTORY—(D) Sem. 1, cr. 3.
Principles and methods of teaching History in high school.
Prerequisite: 15 hours of History.

POLITICAL SCIENCE

Political Science is the study of government and politics. It deals with (1) the organization and activities of governments, American and foreign, (2) the theory and legal basis of political institutions, (3) public opinion and political parties, and (4) International Law and Relations. Political Science offers preparation for the following professional careers:

1. Directly: Consular and diplomatic service, city manager, public administration, civil service, research in public affairs, secretary of civic association.
2. Indirectly: Law, business, social service, journalism, teaching.

Upper division students majoring in other departments may, with the consent of the adviser in Social Science, be allowed to register for upper-division courses without the introductory courses.

Political Science 51 and 52, Economics 51 and 52, History 51 and 52 must be completed before any upper-division work in Political Science may be chosen.

The major in Political Science takes at least 24 units in Political Science, including Political Science 51 and 52. Students majoring in History and Political Science should offer at least 36 units, including History 51, 52, 101, and 102, and Political Science 51, 52, 53, and 54.

COURSES IN POLITICAL SCIENCE

51. INTRODUCTION TO POLITICAL SCIENCE—(B) Sem. 1, cr. 2.
Fundamental political conceptions: state, government; governmental organization and functions; political thought; political parties; international relations.

52. AMERICAN GOVERNMENT—(B) Sem. 2, cr. 3.
Federal and State. Structure and functions. Constitutional development. State administration. Political parties.

53. GOVERNMENT OF ENGLAND—(B) Sem. 1, cr. 3.
Historical survey of the development of political institutions; English theories of government. Study of the operation of the English government in all its activities, at the present time.

54. GOVERNMENTS OF CONTINENTAL EUROPE—(B) Sem. 2, cr. 3.
Historical survey of the development of political institutions of the principal continental countries: France, Germany, Italy, Switzerland, Russia, etc. Analysis of the organization and functions of these governments at the present time.

101. CIVICS—(C)—Sem. 1, cr. 3.
Analysis of political institutions and problems of citizenship in the municipal, state, national, and international fields.
Designed primarily for elementary teachers.
(Given upon sufficient demand.)

103. PRINCIPLES OF INTERNATIONAL LAW—(C) Sem. 1, cr. 3.
Introduction to the principles of International Law, as exemplified in treaties, international practice, court decisions, and treaties. Open to law students.
Given in alternate years.
(Given in 1928-29.)

151. FOREIGN SERVICE—(D) Sem. 2, cr. 2.
Study of the state department. Consular and diplomatic service. Designed primarily for students training for the foreign service.
Given in alternate years.
(Omitted 1928-29.)

152. FAR EASTERN POLITICS—(D) Sem. 2, cr. 2.
Study of the political problems of Japan, China, and of the Pacific in general, as well as of the policies of European nations and the United States.
Given in alternate years.
(Given in 1928-29.)

153. INTERNATIONAL ORGANIZATION—(D) Sem. 1, cr. 3.
Historical survey of international relations. Study of the organization and development of the League of Nations, down to the present time.
Given in alternate years.
(Omitted 1928-29.)

154. FOREIGN POLICY OF THE UNITED STATES—(D) Sem. 1, cr. 3.
Study of the development of the foreign policy of the United States from the colonial days to the present.
Given in alternate years.
(Omitted 1928-29.)

155. UNITED STATES AND LATIN AMERICA—(D) Sem. 2, cr. 3.
Political relations between the United States and the countries of Latin America. Special attention to the policy of the United States.
Given in alternate years.
(Given in 1928-29.)

156. TEACHING OF SOCIAL STUDIES—(D) Cr. 3.

Principles and objectives in the teaching of social studies in secondary schools.

Prerequisite: 18 hours in social science.

Given in alternate years.

(Omitted 1928-29.)

COURSES IN SOCIOLOGY

51-52. INTRODUCTION TO THE STUDY OF HUMAN SOCIETY—(B) Yr. Each sem., cr. 3.

The general structure of society; the development and present-day issues of domestic, political, economic, cultural, and religious groups. The physical, social, and cultural factors affecting society; the nature and organization of society, involving group structure, group function, group objectives, and group mind; the process of society, including association and collective behavior, social struggle and adjustment, social forces, laws, and control.

101-102. SOCIAL PROBLEMS—(C) Yr. Each sem., cr. 3.

A study of social inadequacy and social maladjustments; the problems created by dependents, defectives, and delinquents; intemperance; gambling; the social evil; crime; poverty; juvenile delinquency; unemployment, disablement, and other problems of social organization.

(Omitted 1928-29.)

131. EDUCATIONAL SOCIOLOGY—(C) Sem. 2. Cr. 3.

A presentation of the salient elements of the sociological foundations of education. The topics discussed will include the social groups; socialization and democracy; socialization and the state; social aspects of the curricula; social problems in class room teaching; social factors of school administration; social elements of extra-curricular activities and vocational education; social efficiency and progress.

(Omitted 1928-29.)

THE DEPARTMENT OF ZOOLOGY

Work in this department is designed (1) to give the student an appreciation of the animal life with which he comes in daily contact; (2) to provide the necessary training for teachers of zoology; (3) to prepare students who wish to enter the medical, dental, and nurses' training schools; and (4) to prepare students for graduate work in zoology.

Students desiring to prepare themselves for further studies in dental, medical, and nurses' training schools would do well to select their professional school early in their preparatory career, so that their particular needs can be arranged for by their adviser. This procedure will avoid certain difficulties due to the varying entrance requirements of professional schools.

The student is advised to elect German or French in his freshman year.

PREPARATION FOR MEDICINE
(Two-Year Course)

Freshman Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
Eng. 1.	Language & comp.....	3	Eng. 2.	Language & Com.....	3
	German or French.....	3		German or French.....	3
Chem. 51.	Gen. Chem.	4	Chem. 61.	Qualitative Analysis....	2
Zool. 1.	General Zoology	5	Chem. 53.	Inorganic Chemistry....	4
	Elective	1	Psych. 116.	Adolescent Psychology.	3
				Elective	1
		16			16

Sophomore Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
	German or French.....	3		German or French.....	3
Chem. 102.	Organic Chemistry	6	Chem. 140.	Biochemistry	4
Phys. 51.	General Physics or Phys. 61—Technical Physics	4	Phys. 52.	General Physics or phys. 62—Technical Physics.	4
Zool. 105.	Vertebrate Zoology	5	Zool. 151.	Vertebrate Embryology.	5
		18			16

PREPARATION FOR MEDICINE
Three-Year Course

Freshman Year

(See freshman year of two-year course.)
The student should elect German or French.

Sophomore Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
	German or French.....	3		German or French.....	3
Chem. 51.	General Chemistry	4	Chem. 61.	Qualitative Analysis ...	2
Phys. 51.	General Physics or Phys. 61—Technical Physics.	4	Chem. 53.	Inorganic Chemistry ...	4
Zool. 1.	General Zoology	5	Phys. 52.	General Physics or Phys. 62—Technical Physics.	4
			Zool. 102.	Invertebrate Zoology ...	5
		16			18

Junior Year

	First Semester	*Cr.*		*Second Semester*	*Cr.*
	Elective in English....	3		Elective in English....	3
Chem. 102.	Organic Chemistry	6	Chem. 140.	Biochemistry	4
Zool. 105.	Vertebrate Zoology	5	Zool. 151.	Vertebrate Embryology.	5
	Elective	2		Elective .....3 or	4
		16			15 or 16

PREPARATION FOR DENTISTRY

Students preparing to enter dental colleges will take the freshman year of the two-year pre-medical course. Special needs will be considered by the adviser, on application.

PREPARATION FOR NURSING

Students preparing to enter training schools for nurses will follow the curriculum for a major in Zoology. Special needs will be considered by the adviser, on application.

COURSES IN ZOOLOGY

1. GENERAL ZOOLOGY—(B) Sem. 1, 3+6, Cr. 5.

An introductory course in zoology, considering the principles of zoology and covering a brief survey of the animal kingdom. The laboratory work consists of the dissection and study of the digestive, urogenital, respiratory, skeletal, and other systems of the frog, illustrating the principles of zoology, and introductory work in histology, and embryology, followed by brief studies of type animals belonging to the invertebrates.

Laboratory fee $6.00; *deposit* $2.00.

20. ELEMENTARY PHYSIOLOGY—(B) Sem. 2, 2+3, Cr. 3.

This course is especially designed for the needs of the pharmacy student.

Laboratory fee $4.00; *deposit* $2.00.

22. ANATOMY AND PHYSIOLOGY—(B) Sem. 2, 3+6, Cr. 5.

A thorough course for students in general zoology, suitable also for those desiring to teach physiology in secondary schools, and for students preparing for medicine or nursing.

Prerequisite: Zoology 51.

Laboratory fee $5.00; *deposit* $2.00.

90. THE TEACHING OF ZOOLOGY—(D) Sem. 1, 1+2, Cr. 2.

Discussion of the aims and methods of teaching zoology in secondary schools. Discussion of outlines for courses, texts, and laboratory manuals. Consideration of the equipment of the laboratory, and of the materials to be used, with suggestions on and practice in the collection, preservation, and preparation of materials.

Prerequisite: 10 credits in Zoology.

Laboratory fee $1.00; *deposit* $2.00.

102. INVERTEBRATE ZOOLOGY—(C) Sem. 2, 3+6, Cr. 5.

A course in the morphology of invertebrates. Lecture, discussion, collateral reading, and laboratory dissection of types representative of the various phyla.

Prerequisite: Zoology 51.

Laboratory fee $7.00; *deposit* $2.00.

105. VERTEBRATE ZOOLOGY—(C) Sem. 1, 3+6, Cr. 5.

A comparative study of the morphology of vertebrates. Lecture, discussion, collateral reading, and laboratory dissection of class types of vertebrates.

Prerequisite: Zoology 51.

Laboratory fee $7.00; *deposit* $2.00.

110. SYSTEMATIC ZOOLOGY—(B) Sem. 1, 2+6, Cr. 4.

Collection, identification, and classification of native animal species with special emphasis on the class Insecta. Lectures and discussions will deal largely with the ecological phases of animal life, supplemented by a general survey of anatomical characteristics useful in identification; methods of collecting and preserving; the use of keys. Each student will be required to collect, preserve, and identify, according to family, at least 250 different species. Field trips.

Prerequisite: Zoology 51.

Laboratory fee $3.00; *deposit* $2.00.

151. VERTEBRATE EMBRYOLOGY—(D) Sem. 2, 3+6; Cr. 5.

Lectures and recitations on vertebrate embryology in general. The laboratory work deals especially with the embryonic development of the chick and the pig.

Prerequisite: Zoology 105.

Laboratory fee $5.00; *deposit* $2.00.

GENETICS—See Botany 162.

THE SUMMER SESSION

1928

First Five-week Session, June 18 to July 21.
Second Five-week Session, July 23 to August 25.

1929

First Five-week Session, July 17 to July 20.

Second Five-week Session, July 22 to August 24.

Length of Sessions.—The Summer Session will consist of two five-week terms. School will be in session six days a week. Two five-week sessions are thus equivalent to one twelve-week session.

For Whom Intended.—The Summer Session serves particularly the following groups:

1. Regular university students who wish to secure additional credit, either to make up deficiencies or to shorten the time of their residence at the University.
2. Prospective principals* and teachers of elementary schools and high schools who desire professional or non-professional instruction, either with or without relation to an academic degree.
3. Those desiring to complete the requirements for admission to one of the professional schools of this or another University.
4. Others desiring collegiate instruction during the summer.

Admission.—The general rules and regulations of the University relating to admission both to the freshman year and to advanced standing apply to the Summer Session.

Special Students and Auditors.—Adults who desire to pursue college work without reference to a degree, and those who desire merely to visit

*Second Grade License.

lecture courses in subjects in which they are especially interested and which they are not taking for credit, may register in the Summer Session respectively as special students or auditors and take such courses as may be open to them.

Registration.—The first day of each session is taken up with registration. An extra fee will be charged for late registration. All classes begin regular work the second day of each session. Registration may not be changed after the first week of the session except by approval of the Director of the Summer Session.

All Summer Session work is counted as work done in residence.

Credits.—The maximum credit for which students may regularly register is 12 semester hours for the ten-week session, or six semester hours for either five-week session. This program necessitates an intensive study of two or three subjects at a time.

Grades will be mailed to the students at the close of the Summer Session.

Lectures and Concerts.—As an added feature of the Summer Session (1929), a special program—lecture, recital, or concert—is offered on stated afternoons (excepting Friday and Saturday). An attempt is made to have several lectures each summer devoted to one or two selected subjects of special interest.

Excursions.—The University organizes and conducts for the students of the Summer Session (1929) a series of Friday afternoon or Saturday excursions. The trips add much to both the educational and recreational possibilities of the Summer Session. They introduce students to Chicago's cultural treasures, to its manifold commercial activities, and to some of the beauty spots of the vicinity, such as the Dunes Park.

Summary of Fees.—The fees for the Summer Session are based upon the number of hours of credit for which the student registers. The University does not guarantee any refund to a student who withdraws after registration.

Tuition per credit hour	$ 5.00
Tuition for four hours or less	20.00
Auditor's fee per course	15.00
Special lecture-concert fee per session	2.00
Library fee	2.00
Practice Teaching fee	25.00
Matriculation fee for new students	2.00
Laboratory (see course announcement).	
Field Trips (based on mileage).	

For fees in Music, see Music under Department of Fine Arts.

The cost of tuition, rooms, and meals varies greatly for different persons, but these three major items of a summer's expense during a five-weeks' session should not exceed $75.00.

For information concerning courses of instruction, request the Bulletin of the Summer Session from the Registrar.

PART V

THE COLLEGE OF PHARMACY

GENERAL INFORMATION

Purpose.—The College of Pharmacy was founded in 1893 and is an integral part of Valparaiso University. The College recognizes the necessity (1) of sound technical instruction in the fundamentals of those sciences with which its graduates have to do daily, (2) of thorough training along the intensely practical lines of their profession, and (3) of a broad cultural background of general knowledge, all of which, combined, should serve to give them high professional standing in their community.

Membership.—The College holds membership in the American Association of Colleges of Pharmacy. This association has done much to advance the interests of pharmaceutical education and requires its members to adhere to given standards for entrance, instruction, and graduation.

Admission.—The requirements for admission to the College of Pharmacy as a freshman, or to advanced standing, are the same as for the College of Liberal Arts of this University.

Graduation.—The degre of Pharmaceutical Chemist requires the satisfactory completion of 96 credits and 96 quality points of the three-year curriculum, the first and second years of which may have been taken in some other recognized College or School of Pharmacy.

The degree of Bachelor of Science in Pharmacy requires an additional 32 credits and 32 quality points above the three-year curriculum

Equipment.—Eight laboratories in Science Hall and the Biology Building furnish ample facilities for the students to do their practical work. The main Chemical Laboratory and the Pharmacy Laboratory are each able to accommodate several hundred students. The Dispensing Laboratory is well equipped with modern prescription cabinets. The Materia Medica room is fitted with individual desks and lockers for pharmacognosy and contains display cabinets filled with samples of all the official crude drugs, also chemicals, and pharmaceutical apparatus. There are also special laboratories for Bacteriology, Botany, and Physiology. A good working library, which also has the latest publications in the pharmaceutical field, is maintained in connection with the main University library.

Medicinal Plant Garden.—The college also maintains a medicinal plant garden in which about fifty varieties of plants are raised. The material provided by the garden is used for comparison in the laboratories with the drugs as found on the market.

Field Trips.—The faculty annually arranges inspection trips to the pharmaceutical manufacturing establishments in such cities as Chicago, Indianapolis, and Detroit, so that the student may have some understanding of the preparation of chemicals and galenicals upon a commercial scale. pharmacy, materia medica, and related subjects.

THE CURRICULA

The College offers the following curricula:

1. A three-year curriculum leading to the degree of Pharmaceutical Chemist. (PH.C.)

2. A four-year curriculum leading to the degree of Bachelor of Science in Pharmacy. (B.S. in Pharmacy.)

The three-year curriculum prepares the student for the duties of the retail pharmacist. It is arranged in conformity with the outline given in the Pharmaceutical Syllabus of the American Association of Colleges of Pharmacy. In every instance, however, there is offered and required a greater number of hours than is indicated in the outline. Graduates should also be qualified to do work in analytical chemistry and to fill positions in pharmaceutical laboratories, food laboratories, and the various manufacturing establishments.

The four-year curriculum adds cultural and commercial training to the work of pharmacy proper, that is, to the three-year (Ph. C.) curriculum. The student may also receive additional training in chemistry, pharmacy, materiamedica, and related subjects.

In this connection it should be noted that the college intends to adopt the four-year minimum course by 1930.

THE THREE-YEAR CURRICULUM

Leading to the Degree of Pharmaceutical Chemist.

First Year

First Semester

			Class	Lab.	Cr.
Pharm.	1.	Pharmaceutical Technique	1	3	2
Pharm.	27.	Pharmaceutical Arithmetic	2	0	2
Botany	1.	General Botany	3	6	5
Chem.	51.	General Chemistry	3	3	4
English	1.	English Language and Composition	3	0	3
					16

Second Semester

Pharm.	2.	Pharmaceutical Technique	2	3	3
Botany	101.	Plant Anatomy	3	4	4
Chem.	53.	Inorganic Chemistry	3	3	4
Chem.	61.	Qualitative Analysis	0	6	2
English	2.	English Language and Composition	3	0	3
					16

Second Year

First Semester

Pharm.	51.	Pharmacognosy	2	0	2
Pharm.	75.	Manufacturing Pharmacy	1	3	2
Botany	102.	Microscopic Examination of Fibers, Foods, and Drugs	1	3	2
Chem.	101.	Organic Chemistry	3	6	5
Chem.	104.	Quantitative Analysis	0	6	2
Chem.	153.	Inorganic Pharmaceutical Chemistry	1	6	3
					16

		Second Semester	Class	Lab.	Cr.
Pharm.	52.	Pharmacognosy	2	+ 0	2
Pharm.	76.	Elementary Dispensing	1	+ 3	2
Pharm.	78.	U. S. P. and N. F.	3	+ 0	3
Zoology	20.	Elementary Physiology	2	+ 3	3
Chem.	110.	Organic Pharmaceutical Chemistry	2	+ 6	4
		Elective			2
					16

Third Year

		First Semester			
Pharm.	101.	Pharmacognosy	3	+ 0	3
Pharm.	105.	Pharmacological Standardization	0	+ 3	1
Pharm.	127.	Advanced Dispensing	1	+ 3	2
Pharm.	131.	Pharmaceutical Technology	1	+ 6	3
Botany	125.	Bacteriology	2	+ 6	4
		*Elective	3	+ 0	3
					16

		Second Semester			
Pharm.	128.	Advanced Dispensing	1	+ 3	2
Pharm.	126.	U. S. P. and N. F.	3	+ 0	3
Pharm.	145.	History of Pharmacy	1	+ 0	1
Pharm.	103.	Pharmacognosy	3	+ 0	3
Chem.	140.	Bio-chemistry	3	+ 3	4
		*Elective	3	+ 0	3
					16

THE FOUR-YEAR CURRICULUM

Leading to the Degree of Bachelor of Science in Pharmacy

The first three years are the same as the three-year curriculum. In the senior year, however, a major may be selected in Pharmaceutical Chemistry, Pharmacognosy, or Commercial Pharmacy.

PHARMACEUTICAL CHEMISTRY MAJOR

Fourth Year

		First Semester			
Chem.	152.	Advanced Bio-Chemistry	2	+ 6	4
Chem.	160.	Food and Drug Analysis	1	+ 6	3
		Approved Electives			4
		German or French	3	+ 0	3
Pharm.	191.	Thesis or Approved Electives			2
					16

*Econ. 51 and 52 should be elected in the junior year for those who wish to major in the Commercial Pharmacy Course.

Second Semester

Chem. 155.	Synthetic Organic Pharmaceuticals	2 + 9	5
Chem. 161.	Food and Drug Analysis	1 + 6	3
	Approved Electives		3
	German or French	3 + 0	3
Pharm. 192.	Thesis or Approved Electives		2
			16

PHARMACOGNOSY MAJOR

Fourth Year

First Semester

Pharm. 151.	Pharmacognosy	2 + 9	5
Botany 171.	Botanical Microtechnique	1 + 9	4
	Approved Electives		2
	German or English	3 + 0	3
Pharm. 191.	Thesis or Approved Electives		2
			16

Second Semester

Pharm. 152.	Pharmacognosy	2 + 9	5
Botany 131.	Plant Physiology	2 + 6	4
	Approved Electives		2
	German or French	3 + 0	3
Pharm. 192.	Thesis or Approved Electives		2
			16

COMMERCIAL PHARMACY MAJOR

Fourth Year

First Semester

B. M. 55.	Elementary Accounting	2 + 2	2
B. M. 121.	Marketing Principles	3 + 0	3
B. M. 131.	Business Law	3 + 0	3
Pharm. 176.	Commercial Pharmacy	2 + 0	2
	German, French or Spanish	3 + 0	3
Pharm. 191.	Thesis or Approved Electives	2 + 0	2
		—	15

Second Semester

B. M. 122.	Sales Administration	3 + 0	3
B. M. 172.	Principles of Advertising	3 + 0	3
Pharm. 177.	Commercial Pharmacy	2 + 0	2
	Approved Electives	2 + 0	2
	German, French, or Spanish	3 + 0	3
Pharm. 192.	Thesis or Approved Electives	2 + 0	2
		—	15

COURSES OF INSTRUCTION

Pharmacy

1. PHARMACEUTICAL TECHNIQUE—(A) Sem. 1. 1+3, cr. 2.
This course embraces a thorough and practical discussion of the apparatus and processes used in pharmacy. In the laboratory, which accompanies the course, many of the processes are applied with special emphasis as to technique.
Laboratory fee $6.00; *deposit* $4.00.

2. PHARMACEUTICAL TECHNIQUE—(A) Sem. 2. 2+3, cr. 3.
A continuation of Pharmacy 1.
Prerequisite: Pharm. 1.
Laboratory fee $6.00; *deposit* $4.00.

27. PHARMACEUTICAL ARITHMETIC—(A) Sem. 1. 2+0, cr. 2.
A course in arithmetic dealing with those problems peculiar to pharmacy as weights, measures, specific gravity, alligation, proportion, percentage, profits, and costs.

75. MANUFACTURING PHARMACY—(B) Sem. 1. 1+3, cr. 2.
In this course galenical pharmaceutical preparations of each class are made, such as tinctures, fluidextracts, glycerites, petroxolins, etc. One or more of each class are made and their peculiarities and incompatibilities are discussed in class.
Prerequisite: Pharmacy 2.
Laboratory fee $6.00; *deposit* $4.00.

76. ELEMENTARY DISPENSING—(B) Sem. 2. 1+3, cr. 2.
Typical prescriptions are presented to the student and the method of compounding suggested. Each prescription is labeled, capped, and wrapped, ready for dispensing. Special emphasis is placed on neatness and accuracy.
Laboratory fee $6.00; *deposit* $4.00.

78. U. S. P. & N. F.—(B) Sem. 2. 3+0, cr. 3.
All galenical preparations of the United States Pharmacopoeia and National Formulary are studied and the reason for the process of manufacture for each individual preparation of the class is noted. Prescription incompatibilities are always kept before the student.

126. U. S. P. & N. F.—(C) Sem. 2. 3+0, cr.
This course, coming in the last semester of the senior year, is designed to give the student a thorough review of the chemistry, materia medica and pharmacy of all the drugs and preparations of the United States Pharmacopoeia and National Formulary.
Prerequisite: Pharmacy 78.

127. ADVANCED DISPENSING—(C) Sem. 1. 1+3, cr. 2.
Incompatible prescriptions are given to the student who must determine the best method of overcoming the difficulty without defeating the intention of the prescriber.
Prerequisite: Pharmacy 76.
Laboratory fee $6.00; *deposit* $4.00.

128. ADVANCED DISPENSING—(C) Sem. 2. 1+3, cr. 2.
A continuation of Pharmacy 127, with emphasis on speed without the sacrifice of neatness and accuracy. The prescriptions used in this course are photostatic copies of doctors' original prescriptions.
Prerequisite: Pharmacy 127.
Laboratory fee $6.00; *deposit* $4.00.

131. PHARMACEUTICAL TECHNOLOGY—(C) Sem. 1. 1+6, cr. 3.
In this course Standardized Galenicals of the United States Pharmacopoeia and National Formulary are prepared and standardized either biologically or chemically.
Prerequisite: Pharmacy 75.
Laboratory fee $6.00; *deposit* $4.00.

145. HISTORY OF PHARMACY—(C) Sem. 2. 1+0, cr. 1.
History of the development of pharmacy.

176-177. COMMERCIAL PHARMACY—(D) Year. 2+0, cr. 2.
Commercial problems such as arise in ordering, purchasing, pricing, displaying, advertising, and in the employment of help are thoroughly studied. This course is supplemented as much as possible by lectures from local business men.

Pharmacognosy

51. PHARMACOGNOSY—(B) Sem. 1. 2+0, cr. 2.
Sources and collection of crude vegetable and animal drugs. Field work in the pharmaceutical garden, supplemented by lectures and recitations.
Laboratory fee $3.00.

52. PHARMACOGNOSY—(B) Sem. 2. 2+0, cr. 2.
A continuation of Pharmacognosy 51.
Prerequisite: Pharmacognosy 51.
Laboratory fee $3.00.

101. PHARMACOGNOSY—(C) Sem. 1. 3+0, cr. 3.
A detailed study of the vegetable and animal drugs, including the pharmacological actions, dosage, uses, and toxicology of official and non-official drugs.
Prerequisite: Botany 1, Chemistry 51, Pharmacognosy 51.
Laboratory fee $3.00.

103. PHARMACOGNOSY—(C) Sem. 1. 3+0, cr. 3.
A continuation of Pharmacognosy 101.
Prerequisite: Pharmacognosy 101.
Laboratory fee $3.00.

105. PHARMACOLOGICAL STANDARDIZATION—(C) Sem. 1. 0+3, cr. 1.
A course in biological assaying, employing the official methods of the United States Pharmacopoeia.
Prerequisite: Pharmacognosy 52.
Laboratory fee $3.00.

110. PHARMACOGNOSY—(C) Sem. 1. 1+0, cr. 1.
Habitats of crude vegetable and animal drugs, official in the United States Pharmacopoeia and National Formulary.
Prerequisite: Pharmacognosy 52.
Laboratory fee $3.00.

151. PHARMACOGNOSY—(D) Sem. 1. 2+9, cr. 5.
The study of drug culture and the isolation of plant constituents.
Prerequisite: Chemistry 101. Pharmacognosy 103.
Laboratory fee $3.00.

152. PHARMACOGNOSY—(D) Sem. 2. 2+9, cr. 5.
The microscopic structure and characteristics of types of drugs, methods of identifying powdered drugs and food products.
Prerequisite: Pharmacognosy 103.
Laboratory fee $3.00.

160. PHARMACOGNOSY—(D) Sem. 2. 1+0, cr. 1.
A study of the medicinal plants that are being cultivated, methods of cultivation, harvesting, curing, and preparation for market. Field work with plants that can be successfully grown in the pharmaceutical garden.
Prerequisite: Pharmacognosy 52.
Laboratory fee $3.00.

191-192. THESIS—(D) Year. Each semester. 2+0, cr. 2.
Work to be arranged upon consultation.

PART VI

THE SCHOOL OF LAW

GENERAL INFORMATION

Historical Statement.—The School of Law was established in 1879. During its early years the course of study covered two years of forty weeks each, text-books being the chief basis of instruction. Since 1907 the courses of study have progressively been strengthened, the case method of instruction has been adopted, and the requirements for admission have been raised materially.

Curricula.—The University offers in the School of Law a three-year curriculum, based on an entrance requirement of two years of college work and leading to the degree of Bachelor of Laws (LL.B.). The University also offers a six-year curriculum, comprising three years of college work and three years of work in law, leading to the degrees of Bachelor of Arts (A.B.) and Bachelor of Laws (LL.B.).

While a student may complete his law work in a minimum of five years above high school, *i. e.* two years of pre-law work and three years of law, the six-year curriculum is strongly recommended. The demands of modern legal study and professional service are severe. By providing himself with a liberal education before undertaking the study of law, the student brings to his professional work an increased breadth of view and maturity of mind which tend to make his legal study more fruitful and enhance his success in the practice.

Purpose and Method of Instruction.—It is the design of the School of Law to provide strictly professional training for the practice of law. The method of instruction is chiefly the study of decided cases, with collateral reading of statutes and other legal materials, accompanied by free discussion in the class room. Beginning students, however, are carefully grounded in the fundamental concepts of law and given a general acquaintance with its historical development and its present elements. The aim throughout is to impart a sound knowledge of law and to train students in habits of legal reasoning. The instruction is not local in its scope, but is planned to prepare students for the practice of law in any state.

The need for training in practice and procedure has been met by courses designed to give skill in the application of law in practice. Attention is therefore called to the courses called Use of Law Books, Crimes and Criminal Procedure, Civil Procedure I, Code Pleading, Trial and Appellate Practice, Evidence, and Practice Court.

Law Library.—The library contains the official reports of the Supreme Court of the United States and of leading states, the National Reporter System complete, all sets of general annotated decisions, English reports and digests, the United States Code Annotated and earlier compilations of federal statutes, the United States Statutes at Large, state revised statutes or compilations and session laws, the American Digest System, state and special digests, citations, legal periodicals, the standard law encyclopedias, and a collection of state trials, legal histories, and treatises on law and jurisprudence.

ADMISSION

Applicants for admission as candidates for the degree of Bachelor of Laws must be able to satisfy the requirements for admission to a college

of this University and have completed at least one-half of the work required for a bachelor's degree as granted on the basis of four years of college study.

The entrance requirements of this University, as set forth elsewhere in this bulletin, call for graduation from a four-year commissioned high school or other approved secondary school.

The requirement of one-half the work necessary for a four-year collegiate degree must be met by the completion of two years of study in a college of this University, or credit may be given, wholly or in part, upon a certificate from another college, university or normal school maintaining standards equivalent to those of the principal colleges or universities in this state.

Advanced Standing.—Students who have attended an approved law school will ordinarily receive credit, not exceeding two years in amount, for the satisfactory completion of work similar in character to that given in this school, provided that at the time when they began the law courses for which credit is desired they could have satisfied the admission requirements of this school. The right is reserved to refuse such credit, wholly or in part, save conditionally or upon examination; and credit given may be withdrawn for poor work.

Students from other Colleges of the University.—Subject to the regulations of the college in which they are registered and of the School of Law, junior and senior students in other colleges of the University may elect work in the School of Law.

GRADUATION

Amount of Work.—The normal and required amount of work is fifteen hours a week during the first year and fourteen hours a week thereafter. This amount permits students to complete their case books thoroughly and without extended omissions. A student cannot register for more credits in law without special permission of the Dean

Combined Arts and Law Curriculum.—Students who have completed three years (90 semester hours) of work in the College of Liberal Arts and have received 90 quality points, will receive the degree of A.B. upon completing the first year in the School of Law, and the degree of LL.B. upon completing two additional years in the School of Law. By electing the combined course, students may obtain the two degrees in six years. Students who elect the combined curriculum are required to fulfill the college requirements applying to major and minor studies.

Requirements for the Degree.—The degree of Bachelor of Laws will be conferred by the University upon regular students of the School of Law who have completed eight-six credit hours of law work distributed over three academic years and who have earned eighty-six quality points. Higher degrees in law are not granted. Students admitted with advanced standing in law must have spent at least one academic year in resident study and have completed at least one full year of law work in this school.

Admission to the Bar.—Graduates of the School of Law who are residents of the State of Indiana and not less than twenty-one years of age

may be admitted upon motion to the Circuit Court of the county, the Supreme Court of the State, and the District Court of the United States for the district of Indiana. Members of the faculty do not move the admission of non-residents or of students who do not graduate.

All rules and regulations of the University, except as herein noted, apply in general to the School of Law.

COURSES OF INSTRUCTION

FIRST YEAR

A. INTRODUCTION TO LAW—Sem. 1, 1 hr.

Nature and sources of law; historical development of the common law; fundamental legal concepts; general survey of American law. Bowman, *Elements of Law.*

1a-1b. CONTRACTS—Yr. Each sem., 3 hrs.

Enforceability of contracts not under seal; sealed contracts; the operation of conditions; methods of discharging contractual duties and liabilities; rights of third party beneficiaries and assignees; effects of illegality and impossibility; the Statute of Frauds. Corbin, *Cases on Contracts,* and Bowman, *Problems in Contracts.*

2a-2b. TORTS—Yr. Each sem. 3 hrs.

Trespass and case concepts in the law of torts; legal causation; specific torts, namely assault, battery, false imprisonment, trespass to land and to goods, conversation, deceit, defamation; liability for negligent conduct; absolute liability. Bohlen, *Cases on Torts* (2d. ed.).

3. CRIMES AND CRIMINAL PROCEDURE—Sem. 1, 4 hrs.

The object of criminal administration; historical and modern criminal procedure; nature and elements of crime; attempts; jurisdiction; specific crimes, particularly assault and battery, homicide, larceny and kindred crimes; burglary, arson, forgery, and perjury; circumstances modifying the offense; culpability; privilege; parties in crime; criminal conspiracy. Sayre, *Cases on Criminal Law.*

4a-4b. PROPERTY I—Yr.. Each sem., 2 hrs.

Personal Property: trespass and case concepts in the law of property; possessory interests in chattels; acquisition of title to chattels; fixtures; emblements. *Real Property:* general introduction; rights in another's land, particularly rents, profits *a prendre,* "natural" rights, easements, and covenants passing with an estate. Warren, *Cases on Property,* and Bigelow, *Introduction to the Law of Real Property.*

5a-5b. CIVIL PROCEDURE I—Yr. Each sem., 2 hrs.

A course designed to show the successive steps by which an action is carried through the courts. It includes the form, service, and return of process; appearance; the forms of action; pleading; venue; parties; the conduct of the trial; motions after verdict; judgments; proceedings in the trial court after judgment; enforcement of judgments; effect of a judgment on subsequent controversies. Scott, *Cases on Civil Procedure,* with *Supplement.*

6. AGENCY—Sem. 2, 3 hrs..

The rights, duties and liabilities incident to the relation of principal and agent and the relation of master and servant. Huffcut, *Cases on Agency* (3d ed.).

7. USE OF LAW BOOKS—Sem. 2, 1 hr.

Training in legal research and the use of authorities. Cooley, *Brief-making* (5th ed.).

8. LEGAL ETHICS—Sem. 2, 1 hr.

The ethical obligations of the lawyer. Costigan, *Cases on Legal Ethics.*

In 1928-29 this course will be taken by both first-year and the second-year classes.

SECOND AND THIRD YEARS

Subjects required in the second year: *Equity, Property II, Wills, Legal Ethics, and Practice Court I.*

Subjects required in the third year: *Constitutional Law, Damages, Trial and Appellate Practice, and Practice Court II.*

11. BILLS AND NOTES—Sem. 2, 3 hrs.

The principles governing bills of exchange, promissory notes, and other negotiable instruments at common law and under the Negotiable Instruments Law. Smith and Moore, *Cases on Bills and Notes* (2d ed.).

Alternates with 27. Given in 1928-29.

12. CARRIERS—Sem. 1, 3 hrs.

A general consideration of bailment undertakings involving ordinary liabilities, and a more extended study of carriers, innkeepers, and other public service relations involving extraordinary liability. Green, *Cases on Carriers* (2d ed.).

Alternates with 13. Omitted in 1928-29.

13. CODE PLEADING—Sem. 1, 3 hrs.

A study of actions and special proceedings under modern codes. The course deals with the complaint, including necessary allegations, method of statement, and prayer for relief; demurrers; answer, including denials, new matter, equitable defenses, counterclaims, and union of defenses; replies. Sunderland, *Cases on Code Pleading,* and Bowman, *Code Pleading and Practice.*

Alternates with 12. Given in 1928-29.

14a-14b. CONSTITUTIONAL LAW—Yr. Sem. 1, 3 hrs. Sem. 2, 2 hrs.

Relations between the federal government and the states; scope of legislative, judicial, and executive powers; interstate commerce; money; federal taxation; the government of dependencies; constitutional inhibitions in favor of life, liberty, and property; due process of law and equal protection of the laws. Wambaugh, *Cases on Constitutional Law.*

15. CORPORATIONS—Sem. 2, 4 hrs.

Formation and distinguishing features; promotion; liability for torts and crimes; including offenses under the anti-trust acts; *de facto* corpo-

rations; *ultra vires* transactions; officers, stockholders, and creditors; corporate reorganization. Warren, *Cases on Corporations* (2d ed.).

Alternates with 18. Omitted in 1928-29.

16. DAMAGES—Sem. 1, 2 hrs.

Compensatory damages; nominal, liquidated, and discretionary damages; measure of recovery in specific tort and contract actions. Case book to be announced.

17a-17b. EQUITY—Yr. Sem. 1, 3 hrs. Sem. 2, 2 hrs.

Nature and scope of equity; injunctions; specific performance; reformation and rescission; recovery for benefits wrongfully retained. Cook, *Cases on Equity* (one-volume edition).

18. EVIDENCE—Sem. 2, 4 hrs.

Rules for the exclusion of evidence; function of court and jury; burden of proof; examination of witnesses. Wigmore, *Cases on Evidence* (2d. ed.).

Alternates with 15. Given in 1928-29.

20. PARNERSHIP—Sem. 1, 3 hrs.

Nature; formation and membership; rights, duties, and liabilities of partners *inter se* and in relations with third persons. Gilmore, *Cases on Partnership,* and Britton, *Supplement.*

Alternates with 21. Given in 1928-29.

21. PERSONS AND DOMESTIC RELATIONS—Sem. 1, 3 hrs.

The law of huband and wife, parent and child, infancy, marriage and divorce. Kales, *Cases on Persons,* and Vernier, *Supplement.*

Alternates with 20. Omitted in 1928-29.

22. PRACTICE COURT I—Sem. 1, one hour a week. No credit.

Arguments and briefs on issues of law reached by demurrer, stated in instructions, presented in motions for a new trial, and the like, one student appearing for each side. Required of all second-year students.

23. PRACTICE COURT II—Sem. 2, one hour a week. No credit.

Criminal prosecutions and civil actions are instituted and prosecuted to judgment. The court meets for two court terms, called an "issue" term, and a "trial" term. During the first term especial attention is given to the service of process, appearance, the framing of pleadings, and the joining of issues. During the second term causes at issue are brought on for trial and conducted through the various stages to judgment. Required of all third-year students.

24. PROPERTY II (TITLES TO REAL PROPERTY)—Sem. 1, 4 hrs.

Estates in land; original titles founded on possession, prescription, and accretion; conveyancing, including execution of deeds, description of the land conveyed, creation of easements by implication, recording, and title to estoppel. Aigler, *Cases on Titles to Real Property,* and Bigelow, *Introduction to the Law of Real Property.*

25. PROPERTY III. (FUTURE INTERESTS)—Sem. 2, 3 hrs.

Expectant interests in real and personal property; powers; the rule against perpetuities. Powell, *Cases on Future Interests.*

Alternates with 29. Omitted in 1928-29.

27. SALES—Sem. 2, 3 hrs.

Transfer of title to personal property; rights and remedies of buyer and seller; the Uniform Sales Act. Woodward, *Cases on Sales* (2d. ed.). Alternates with 11. Omitted in 1928-29.

28a-28b. TRIAL AND APPELLATE PRACTICE—Yr. Sem. 1, 3 hrs. Sem. 2, 2 hrs.

Jurisdiction; record proper and bill of exceptions; proceedings based on the record and on trial of issues. Modes of review in appellate tribunals; laying foundation for review; transfer to reviewing court; disposition of cases on review. Sunderland, *Cases on Trial and Appellate Practice.*

29. TRUSTS—Sem. 2, 3 hrs.

Nature and elements of a trust; charitable trusts; resulting and constructive trusts; remedies of *cestui que trust;* duties of trustees. Scott, *Cases on Trusts.*

Alternates with 25. Given in 1928-29.

30. WILLS AND ADMINISTRATION—Yr. Sem. 1, 1 hr. Sem. 2, 2 hrs.

Testate and intestate succession to property; administration of decedents' estates. Case book to be announced.

BEQUESTS

The following memorandum of a form for wills, bequests, etc., is included in this publication for the convenience of friends who may desire to make provision for the University:

"I bequeath to the Lutheran University Association, organized under the law of the State of Indiana

.....

for ....."

The first blank is left open for bequests of money or for the description of the gift. The second blank should indicate the purpose for which the gift is to be used: Endowment, restricted or unrestricted; building funds; student loan funds, etc.

The Trustees of the University will use every precaution to see that the funds are used as the donor wishes.

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*Owing to the recasting of portions of this catalog, some errors and omissions may be discovered. These will be corrected in a subsequent issue.